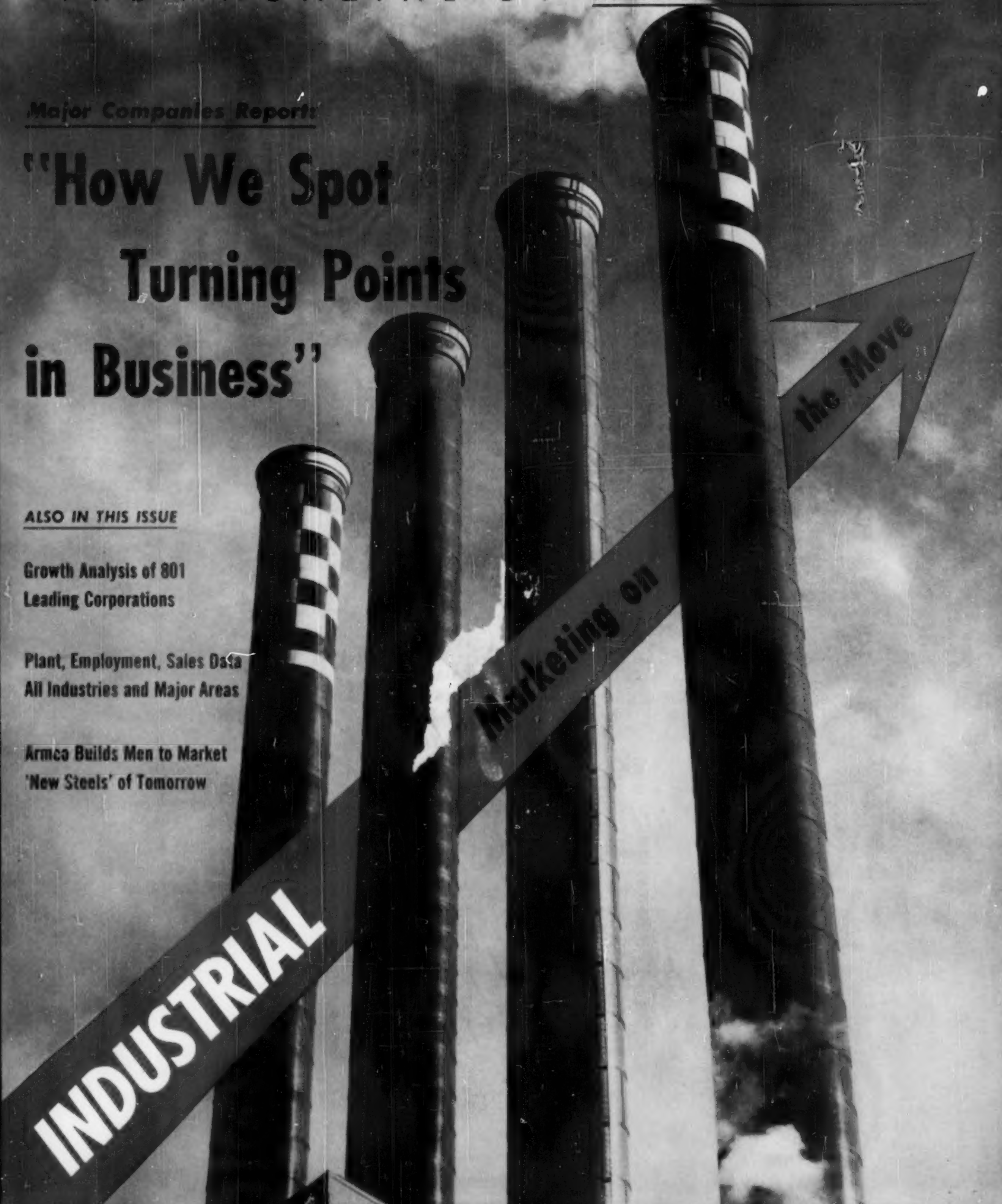
DECEMBER 16, 1960 $2.00

Sales Management

THE MAGAZINE OF MARKETING

Major Companies Report:

"How We Spot Turning Points in Business"



ALSO IN THIS ISSUE

Growth Analysis of 801 Leading Corporations

Plant, Employment, Sales Data All Industries and Major Areas

Armco Builds Men to Market 'New Steels' of Tomorrow

For 1961
the editors are proud to announce
that the forthcoming
new novel by

Herman Wouk
entitled
"Youngblood Hawke"
and the forthcoming
new novel by

John Steinbeck
entitled
"The Winter of Our Discontent"
will appear serially
prior to book publication
in McCall's
First Magazine for Women

the slipsheet

For issue of December 16, 1960

an informal "f.y.i." before you read the issue

"...One cup of tea, two lumps of sugar, to the 8th floor --- and fast!"

Gazing out of the windows here at Sales Management's New York offices, we've been fascinated by the step-by-step construction of a modern, 44-story office building right across the street. Soon, its interior will be flushed with activity and the clacking static of typewriters. But right now, skilled laborers have the skyscraper to themselves, putting on the finishing touches.

We've noticed with much interest that the "coffee-milk-or-tea" breaks for these on-the-job workmen have been placed on a rather unique basis: they're unofficial "catered" affairs...with the mid-morning snacks being ordered by yelling over the noise of cement mixers, and with the drinks and donuts being delivered to constructioneers via the freight elevators...whether they're on the 3rd floor or 42 floors straight up. That's what we'd call service...with a big reach. Sort of an extra "fringe" benefit for those who build for the future!

Service with a big reach is also very characteristic of SM magazine. In case you haven't heard, SM's circulation has surpassed that of 30,000. (In that building yonder, we're certain that some of the space will be occupied by at least one group of subscribers --- that of Socony Mobil Oil Co.) And our reach stretches not only horizontally across the nation, but vertically as well: 16,134 of our subscribers are withing the ABC categories of presidents, vice presidents, sales managers and branch and division managers...more than is reached by Printers' Ink, Advertising Age, Industrial Marketing and Media/Scope, combined! That's really a reach with top-notch grabbing power.

We're equally proud of SM's personalized reach between individuals within these groups, as evidenced by this quote from a letter written by Mr. H.S. Bechert, Vice President-Sales, NORTH AMERICAN VAN LINES, INC. --- "Sales Management magazine is not only a good, sound business publication, but a good family publication from the standpoint of our sales management fraternity." Acceptance, by men like Mr. Bechert, of Sales Management as a "house organ" as well as a business publication, is sort of a "fringe benefit" for SM's advertisers.

* * * * * *

A new year is just about upon us. It's a year that SM will continue to build and grow, providing even better opportunities for our tenants, i.e., you, our advertisers. Because of time and distance, and also the fact that our noses are already at the grindstone preparing for your May 10 Survey of Buying Power (gentle reminder?), we take this SLIPSHEET as the means of reaching you with our very best wishes for the next twelve months...for a perfect 1961 that is really your cup of tea...brewed the way you want it...without any lumps, whatsoever.

\# \# \#

The Publishers

Sales Management

THE MAGAZINE OF MARKETING

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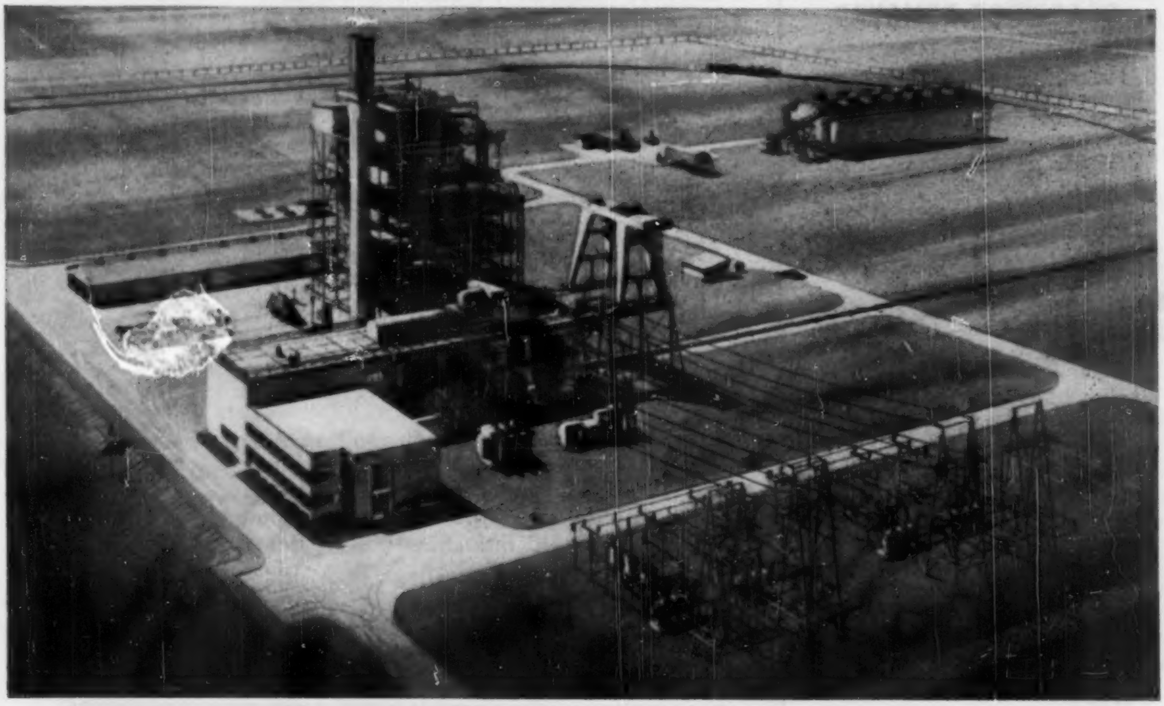
"the slipsheet" is included only in complimentary copies.

This power plant will be completed in 1961. It will call for $649,000 worth of instruments and controls.



Whose instruments and controls are they reading about in POWER ENGINEERING?

Sales Management

THE MAGAZINE OF MARKETING

December 16, 1960 Vol. 85, No. 15

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Sales Management

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Bill Brothers Publications in MARKETING (in addition to Sales Management): Sales Meetings, Premium Practice. INDUSTRIAL: Rubber World, Plastics Technology. MERCHANDISING: Fast Food, Modern Floor Coverings and Modern Tire Dealer.

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-SM- NOTES FROM THE EDITOR'S SIDE POCKET

Optimism for Durable Goods

There's no point in trying to kid anyone into thinking that this year has lived up to the rosy expectations held for the first year of the "Soaring Sixties." But just as the optimism of many businessmen was dashed by a profit squeeze, if not by declining sales, much of the pessimism about the future is unwarranted. Certainly the chances are better that the decade will turn out to be the **soaring** sixties than that it will go down in history as the **slipping** sixties.

But let's take a closer look. What about 1961?

The very fact that profits are being squeezed, that they are off much further than are sales, is an optimistic fact, for it means that plants must be modernized, that new equipment must be purchased, that every advantage must be taken of the frontiers that have been opened through electronics and automation.

The primary reason why we are being undersold in world and domestic markets, especially by Germans and Japanese, is not nearly so much due to lower wages paid for labor as to the fact that, largely speaking, those countries had to start from scratch at the end of the war. They had to build **new** plants, install new machinery, and they didn't **re**-build in the sense of merely rebuilding the old: they took advantage of every new development and device, many of them developed under the pressure of war. In industry after industry they are truly modern, while we are semi-modern.

So it isn't surprising that the McGraw-Hill forecast for capital goods expenditures points to a continuation of the high level we have been enjoying, or that a survey made by Dun's Review among 1,480 executives shows that manufacturers of durable goods expect their chances for an increase in new orders to be better than do the makers of non-durables.

What You'll Find in This Issue

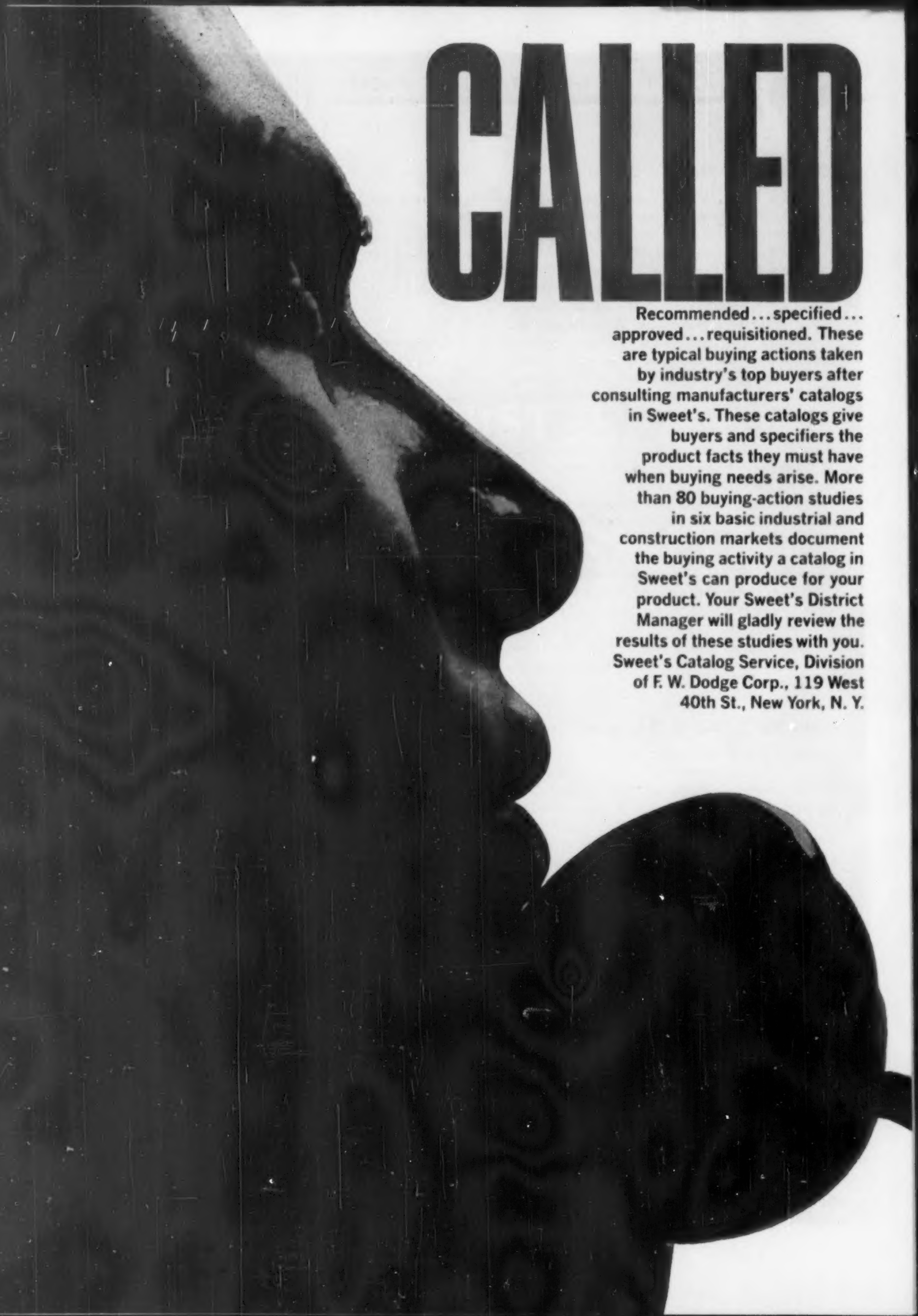
Both Presidential candidates expressed dissatisfaction with the nation's rate of growth, and the campaign pointed up the general public's concern with the decisions of businessmen. If we are heading into, or are in a recession in some lines or areas, when will we commence to get out?

The political climate of the times provides a new sense of urgency for a feature on this subject that would be pertinent to sales executives at any time. The lead article in this issue is "How We Spot Turning Points in Business," and in it we draw upon the experiences of the professional economists on the staffs of Du Pont, Armstrong Cork, Procter & Gamble, Koppers, and 12 others.

These economists name the half-dozen or so factors which they rely upon in making their own judgments of economic conditions as they affect the nation as a whole, their industries and their companies. Some of them will be applicable to your business. You will find them helpful in making your judgment on the near-term (3 to 12 months).

While all of us are under pressure to handle the day-to-day operating problems we also must find time to take the longer view, which sometimes means looking back a decade to see how our progress matches that of the economy as a whole, and how our competitive relationship may have changed. We may show a 50% gain, but if the industry of which we are a part has doubled, we shouldn't indulge in self-congratulations.

You will find especially helpful the "Rate-of-Growth Analysis of 801 Leading Corporations," a study made exclusively for Sales Management by Value Line Investment Survey. The study shows rate of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growth since 1947-49 arranged by 47 industry groups, compared with growth of the Gross National Product, and the 10-year average return on net worth.

The decade ahead promises to see an ever-wider acceptance of the SIC (Standard Industrial Classification) codes, first, developed by the Federal Government in 1939, and recently revised, to secure comparable data from industry.

By means of SIC it is now possible for many industries to classify their customers and prospects. In this issue are a number of articles with special appeal to three groups: (1) the manufacturer who knows little about SIC but who wants to "get his feet wet" in applying this system of identifying markets, (2) the manufacturer who is well started on using SIC but is ready to enlarge his knowledge, and (3) the sophisticated user who is anxious to trade ideas on SIC.

Much of the pioneering in industry that has led to the ever-increasing application of SIC has been accomplished by business publications. It is in recognition of their dedicated work that we have asked six publishing houses, whose publications range across industry, to describe the benefits of the SIC system, and to point out fresh areas for development. You will find their recommendations on "How to Apply and Use SIC Data" on page 61.

For a variety of ways in which SIC codes are being used today you will want to study—and have your advertising and market research managers study – the "16 Case Histories on Use of Plant and Employment Data," beginning on page 40.

The cases detail how SIC is invaluable in identifying prospects, determining potential, establishing sales territories, setting up sales quotas, and reveal a relatively new and immensely significant trend—the use of SIC data in selection of media.

You can check your problems with those of such companies as Westinghouse, Norton Co., Greenfield Tap & Die, Vickers, Handy & Harman, Superior Tube, Foote Bros., and Cambridge Wire. Marketing executives in these companies are enthusiastic about the benefits they find in SIC.

▶ The SIC material in this issue is designed for use by both the long-range planner and the operating executive. For example, if you are interested in checking the degree of change in each of the 450 industries now classified by a 4-digit SIC number, turn to the article on page 112. Here Peter B. B. Andrews, with the help of 314 experts, shows both employment figures and value of products shipped for the years 1960 vs. 1958, and percent of change 1960 vs. 1947.

The executive concerned with locating prospects today will find highly practical help in the 13 pages of a unique directory of "Major Plants and Employees by Metropolitan County Areas." This directory shows, for example, the identity, the number of employees and the SIC classification of plants employing 500 or more in each of the 450 SIC categories. In all, information is given on 4,661 plants. You can compare the number of your customers, and the combined total for customers and prospects, and determine the extent of your coverage of the markets to which you sell.

In December many decisions affecting 1961 sales plans will be confirmed. Decisions on many matters will also be kept fluid so as to capitalize on opportunities as they arise. Business is keeping a wary eye on inventories. This is one of the reasons Sales Management publishes every three months, as it does in this issue, the popular feature, "Advertising Weathervane," which provides excellent clues on the need for more advertising pressure. See page 54.

You should find this **Industrial** "Marketing on the Move" issue helpful now.

Phil Salisbury


MANAGEMENT
DESIGN
PRODUCTION
MAINTENANCE

Selling Is Not for the Birds

Salesmen, relax: Birds are not going to take over your jobs.

For a while, recently, it was touch and go as to whether our feathered friends **would** supplant salesmen. And it was Interstate Steel, of all companies, that entertained the theory that pigeons could take orders just as well as men. Here's what happened: Interstate launched an experiment—and seven pigeons—around the Midwest to see if the procedure involved in getting sales orders back to the main office might be strictly for the birds.

▶ If you can stand another pun, the idea laid an egg. But the pigeons, looking a little buffeted, made it back to Chicago.

Interstate told us about it, dropping puns in what we thought was an entirely frivolous way. "We wanted to find out if a company could feather its nest by counting on pigeons to bring in the orders," said Interstate's president, Howard R. Conant. "We egged our customers into letting pigeons deliver the messages in order to find out whether or not this was a flighty idea."

He didn't say it, but we will: Interstate had to pigeon-hole the idea.

"We have discovered," continued Conant, "that it is faster and more efficient to have our salesmen continue to bring in their own orders."

The theory wasn't bad. Interstate got purchasing agents in seven Midwestern cities to send pigeons winging back to the company's main office in Chicago. Simultaneous take-off points were Milwaukee and Beaver Dam, Wis.; Kalamazoo, Mich.; Rockford and Bloomington, Ill.; and Newton and Boone, Iowa.

Orders for steel which had been placed with Interstate were in capsules attached to the pigeons' legs. Interstate discovered that pigeons were too flighty to be entrusted with important sales orders. All seven got back to Chicago but some were as much as two days late. No one had done enough research to ascertain that no pigeon will stand for a fly-by-night operation. When it gets dark, pigeons settle down for the night. Even allowing for the fact that pigeons get up with the birds, there's a sag in the schedule.

▶ Nor did Interstate realize that pigeons refuse to fly over water. They go around it.

Conant assumed that one bird would take the direct route from Kalamazoo, down the Kalamazoo River to Lake Michigan and across to Chicago. Not a bit of it. The bird which had that route did the whole trip over land.

"Such delays and uncertainty could be damaging to Interstate," said Conant, looking worried. "Even though it seemed sure the pigeon would bring the order to us eventually, the suspense could cause our customers to wonder and worry. Even more important, many of our customers place rush orders. If a purchasing agent requests immediate delivery, he does not want the whim of a pigeon to determine how long it will take the order to get to us."

It was a terrible letdown for Conant. The quixotic behavior of his pigeons knocked the props from what had been the main argument in their favor—that no pigeon worth his coo ever stopped in at a bar or came up with lame excuses like broken-down cars, late trains, or lack of airplane reservations.

"Some of our pigeons took so much time getting back here," he added, "that they might as well have spent the time in a bar, for all the help they were to Interstate. They checked in sober, but that's small consolation for their slowpoke approach."

He's really relieved that it's all over, because all sorts of hazards inherent in having pigeon messengers keep coming to his mind. Suppose, he muses, the competition took to shooting down his sales orders? Or a siren-type girl pigeon batted her wings at one of his messengers?

"We never intended to replace our salesmen completely," he weasles. "We knew we would need them as salesmen. When a purchasing agent has some questions about our steel, he wants to hear something more substantial than 'coo.'"

So, he insists, he's delighted that none of his two-legged, non-feathered salesmen flew the coop during the experiment. ♦

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A total of 950,000, or 240,000 MORE than the second evening paper.

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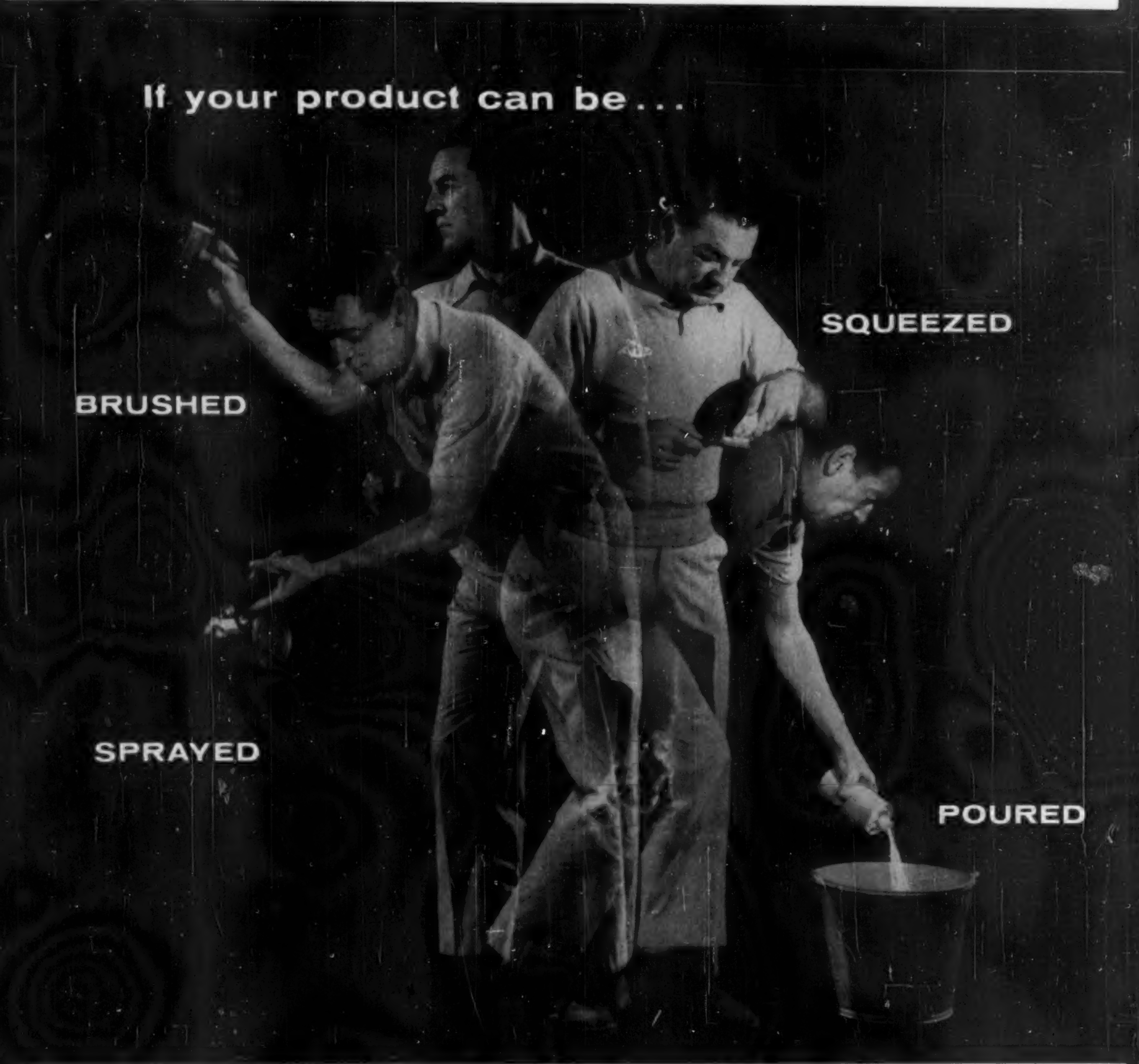
A total of 1,070,000, or 230,000 MORE than the second evening paper.

MORE READERS IN FAMILIES WITH CHILDREN UNDER 15 YEARS
A total of 670,000, or 250,000 MORE than the second evening paper.

Source: N. Y. Daily News "Profile of the Millions"



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BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

How to win local markets—anywhere

Olivetti Machine Tools decided to sell its precision-built machines in the United States. This move set up a problem, for this Italian-based company has to convince prospects that they can get *fast and dependable parts service.*

"The first thing prospects want to know about is the availability of parts," said Mr. Robert A. Blum, U. S. manager of the tool division of world-famous Olivetti. "We tell them we maintain a basic supply of parts in our New York warehouse, and this supply is kept up by a steady flow of shipments from Italy by Emery Air Freight.

"Then they want to know how quickly they can get replacement parts from our American stocks to keep costly 'down time' in their plants to a minimum. Our answer is: we distribute parts from New York *overnight* to our customers anywhere in the United States by Emery Air Freight. And the fact that they can rely on this fast air freight service clinches the sale for us.

"Emery Air Freight is one of our strongest points in selling prospects and keeping them as customers. And another point, Emery helps us keep inventory costs to a minimum."

EMERY AIR FREIGHT

801 Second Avenue, New York 17, N.Y. *"EMERY—Worldwide Blue Ribbon Service"*

The Heat Is on Prices Again

As if the salesman doesn't have enough **troubles**, word is in that good, old-fashioned **price pressures** are building up to nightmare levels.

For quite some time, purchasing agents have been putting the **value analysis** squeeze on salesmen. Demands for more and better **services** have led to marketers' assuming more and more of the customer's traditional service, inventory and even research expenses. Unit price has been secondary to **total** cost with most astute purchasers. And salesmen (and indeed entire marketing departments) have been responding beautifully by offering faster and more accurate deliveries, cost-cutting cooperation, greater numbers of tailored products.

The object has been this: The famous profit squeeze has given purchasers a once-in-a-lifetime opportunity to prove how vital they are to the corporate scheme. Playing "a penny saved is a penny earned" to the hilt, they have been making the most of their opportunity to carry their companies through the lean profit years.

But the same company that has a purchasing agent has a marketing department. It has been subject to similar value pressures from **its** customers. So far, the profit picture has just continued to look bleaker. And the need for remedies appears more urgent than ever.

So the purchasing agents are apparently tightening the thumbscrews. Although pressure for more services (and hence greater values) continues uninterrupted, the **price tag** is being singled out as a most fertile point for **improvement.**

And it's not all a matter of telling salesmen to "sharpen their pencils" and lower their quotes, either. Rather, a wide variety of devices are being employed to crack suppliers' prices. Basically, the attitude can be summarized like this: "Traditional buyer-seller relationships must go by the boards. We're doing everything we can to present our story to as many potential suppliers as possible. In some cases we will find new suppliers with lower prices. Even if we don't, this technique gives us a **club** to hold over our present suppliers."

Here are just a few of the ways purchasers are implementing their crash programs on price:

• Where only one logical source of supply exists, buyers are approaching other companies and attempting to "sell" them on the idea of producing the product. In this way, they hope to create a more **competitive** situation.

• Specific cost reduction **percentages** are being handed out as quotas for purchasing agents. These may be based on careful calculation, but are far more likely to be a bit arbitrary. With a quota and a date to make it by, the buyer has little desire for discussion. He must make the moves that result in the greatest savings **fastest:** price pressure. And he might even be willing to take a chance on quality to get his price.

• Similarly, large purchasing operations are being divided up into **"specialist"** areas; different buying operations are singled out as those with the greatest **savings** potential, and these are assigned to different individuals. Once assigned a target area (which often involves only one supplier), the purchaser's task is to live with that situation until every conceivable saving has been realized. Price, of course, plays a leading role.

• Buyers are in some cases actually baring their souls to potential suppliers and inviting cost reduction aid. Some are sending out letters explaining various parts of the company's manufacturing operation, including some details of production and prices paid for materials. Aid is requested in the form of **suggested efficiencies** or **lower price offers** or, preferably, both. Another even less subtle

technique is to put a variety of items purchased by the company on **public display**, perhaps in a reception room or building lobby, price tag each article, and post a sign saying that the company is trying to do better.

There is one thing prevalent in all of these moves: the purchaser's unwavering assumption that somewhere, somehow, **everything** can be gotten a little cheaper--even if it means breaking with traditional suppliers.

Price Scandals Hurt, too

It is worth mentioning that purchasers have a strong argument to use on salesmen in a number of big industries. These are the industries that have been, or are, or soon may be, in **hot water** with Uncle Sam for price collusion on Government bids. Among these are the electrical equipment industry, steel, chemicals, aluminum wire and cement. If nothing else, such scandals give purchasers a perfect excuse for demanding lower prices based on a "what-do-you-mean-you-can't-go-lower-and-still-make-money?" attitude.

In addition to these **competitive** play-one-against-the-other price pressures, another pressure is developing within the customer company itself. With production facilities being upgraded to operate more **efficiently**, and with many industries operating at considerably **less than capacity**, engineers are re-evaluating their ability to profitably make more of the components and parts that are now purchased outside. If a supplier's price can be beaten or even matched, the purchasing agent has the **biggest price club of all.**

Fortunately, this renewed price pressure probably **won't continue** too long. There can be no doubt that it is spurred by the profit slump, which should ease before long. As the economies and efficiencies instituted at some cost this year begin to take hold, and as business in general begins to pick up in a few months, profits should begin to look much better. Then, purchasing pressure will probably revert to a service-oriented value analysis proposition.

But even though the squeeze on prices may be **short lived**, and even though it may just be **spotty** or felt in varying degrees by different industries, it is more than a field sales problem. It requires some **top-level** sales management decision making.

Most sales managers will, at this point, probably prefer to **risk losing the customer** rather than cut the price. Their own profits are weak enough to keep them from making any more sacrifices. They know that once the price is lowered, it's a full-scale fight to ever get it back to normal. Experience has taught them that if word gets around that their price structure has cracked, they get no peace until prices are lowered all along the line. And most of all, they know that if they lower their prices, so will their **competitors**, and the whole run-around will begin again, only at a less profitable level.

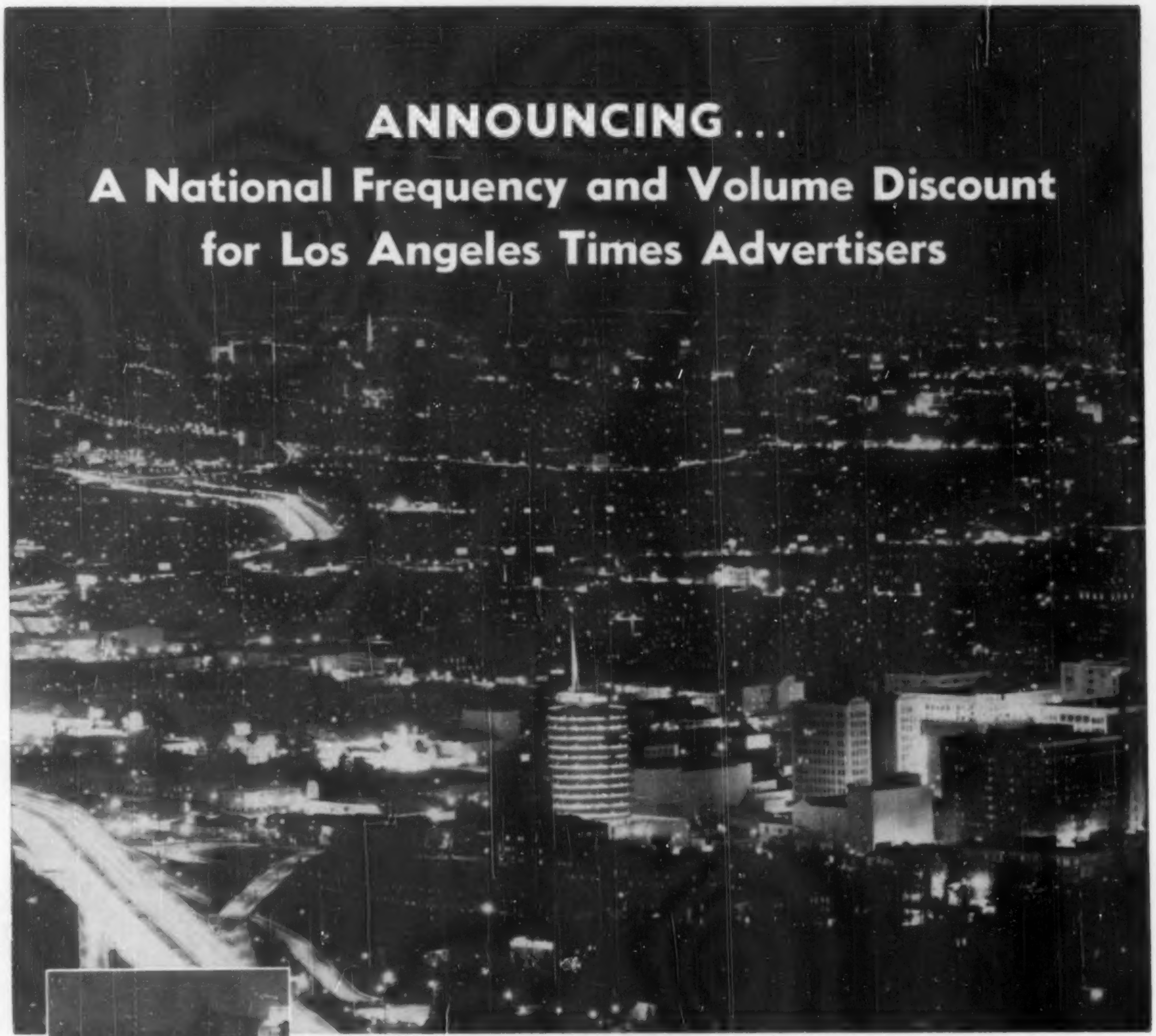
Sales Manager's Choice

The sales manager must choose the approach that best suits his particular company and his industry. He will probably decide that his competitors' customers may be getting a little dissatisfied, too—and launch a drive for new accounts. He might also decide to start emphasizing those products that have not been hit by price-cutting demands. Whatever course he selects for his sales effort, he must realize that it will probably be short-term action with far-reaching effects.

Of course, no sales manager will want to lose existing accounts. But chances are that keeping an account in the face of heavy price pressure is largely a matter of the salesman's own dexterity. He may squeak through by re-emphasizing the quality story. Or, like one salesman we know, he might choose to inform the purchaser that "our prices will definitely be lower by the time you are ready to re-order in July," and then hope like hell that his customer is plagued with a short memory.

And our friend might get away with it, because by summer the better business weather should be pushing price back into line with service and quality as only one of several things to consider in making a smart buying decision.

ANNOUNCING . . .
A National Frequency and Volume Discount for Los Angeles Times Advertisers



The Discount Plan also applies to The Los Angeles Mirror

ANOTHER FORWARD STEP . . .

The Times is pleased to announce that beginning January 1, 1961 a National Frequency and Volume Discount will go into effect for advertisers on a 26-week contract. This means that the west's leading advertising medium—over and above its many present advertising advantages—now offers another very substantial reason for using The Times as a basic medium in the great Los Angeles marketing area.

FLEXIBILITY FOR ALL ACCOUNTS . . .

A major advantage of The Times' new Frequency and Volume Discount Plan is its unique flexibility which builds on the inherent flexibility of the newspaper medium.

Here is a discount structure which enables you, the national advertiser, to truly coordinate your advertising and sales efforts and provide impact when you need it most . . . during model changes, introduction of new products, seasonal demands and other periods of special importance in your business. The size of your ad, the frequency—these can be varied to meet the sales needs of your advertising schedule.

The new plan applies to advertisers in any category who place 6 or more insertions and run 6000 or more lines in The Times during a 26-week contract period. The discounts range from 2% for minimum performance to 15% for a schedule of full pages.

For complete details contact Los Angeles Times, Los Angeles 53, California, or Cresmer & Woodward, Inc., New York, Chicago, Detroit, Atlanta, Los Angeles, San Francisco.

MORE THAN EVER—IN THE SIXTIES—IT'S THE LOS ANGELES TIMES—THE WEST'S LEADING ADVERTISING MEDIUM

—SM— MARKETING

SALESMEN USE RADIO CARS

Lake Tahoe, Cal.—With all the high-powered developments in communications these days, it's not surprising to see real estate salesmen running around in radio cars. Tahoe Paradise Homes, with 40 salesmen selling 1,600 acres, solved some curious problems with the use of 2-way radios. Activity was often so frantic that two different salesmen unknowingly sold the same plot to different customers. Now salesmen hear of the sale of a piece of property minutes after the transaction and cross the plot off their list.

CHRYSLER REBUILDS

Detroit—The automobile manufacturer's long neglect of the promising rebuilt parts market is over. Chrysler Corporation's Mopar Division will market a complete line of rebuilt automobile and truck parts from engines to oil pumps. The industry has been beckoning the bigs for years with such tempting statistics as $250 million in sales in 1958 (a 20% increase over 1953) and estimates of $300 million by 1965.

While Chrysler's program is the most ambitious so far, the company is actually not first to enter the field. The Ford Motor Co. program allows independent remanufacturers to rebuild parts to the company's specifications and to deal directly with Ford dealers in their respective areas. Chrysler's independent remanufacturers will make a more complete line and will deal with the company's 115 wholesale distributors, thus taking advantage of the big company's distribution set-up.

RADIO GOES INTERNATIONAL

New York—With so many magazines boasting international circulation, it was only a matter of time before other media followed suit. Metropolitan Broadcasting Corp. recently completed transactions for its purchase of WRUL, an old international station, which it will call Worldwide Broadcasting. Around since 1931 when it was started as a non-commercial venture, WRUL later accepted a limited number of commercials but was never a big sponsor-getter. Metropolitans' beefing-up process will pump energy and money into the station's sales efforts, add to its present multilingual staff and enable it to do a great deal more broadcasting.

BOON TO AIR FREIGHT

Montreal—The world's first turbo-prop, swing-tail cargo airplane is in the air. Canadair, which has been talking about it for some time (see SM April 15, 1960, p. 34), launched the Forty Four cargo plane on its first engineering test flight last month. A unique feature of the new plane is its hinged tail-section which swings open for easy, straight-in loading.

ROOT BEER TURKEYS

Philadelphia—Faced with increased competition from non-carbonated soft drinks (ades, etc.), Charles E. Hires Co. is eagerly searching for new ways to use its root beer. The company recently hired a noted home economist to develop recipes and food combinations utilizing the beverage. So far she has come up with turkey basted in root beer, cherries steeped in root beer and root beer flavored gelatin desserts.

BIGGEST BUDGET YET

New York—Let others cut costs by reducing ad budgets. Hertz Systems, Inc., is spending $7½ million on its 1961 program, 15% more than last year, and the largest amount ever spent by a car rental company. Its 60- and 20-second spot announcements on TV alone will cost $2 million.

DOUBLE EXPOSURE

Port Chester, N.Y.—Insurance that readers exposed to an ad will expose themselves to the product is provided by Royal McBee Corporation's Life giveaway ad. It features a lucky num-

on the MOVE

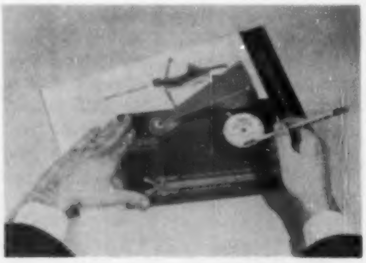
ber card (a different number in each copy) which the reader must take to an authorized dealer to have checked against a register list of winning numbers. If the number is really lucky, the reader receives a Royal Futura portable typewriter free. Over 6 million subscription holders should be calling on Royal dealers; those who don't win may stay to buy.

CHRISTMAS SEAL TWIST

Lansdowne, Pa.—In a sense Christmas seals have always been advertising media, but no one ever expanded on the idea. Now the Minipix Co. is making full-color stamps that travel free on letters, bills, envelopes, circulars, etc., and carry an advertising message. Good for year-round use, the stamps are available in three sizes and cost from ½c to 2c. Some of the users of the stamps: Bell Telephone for its new Princess phone, Guatemala to the tourist trade, and Lillian Farmer, a model, who uses them to advertise herself.

PR BECOMES A PRODUCT

New York—Getting double mileage out of its public relations department, General Dynamics Corp. has written a book that sells at $20 a copy to the general public. Handsomely bound and illustrated, the 420-page volume tells the story of GD and its predecessor divisions in the context of American history. The book is published and distributed by Doubleday & Co.



DESK-TOP ROSTRUM

New York—Not satisfied with sending promotion phonographs by mail, Talon, Inc., sent along the phonograph in the mailing piece. Part of a big promotion drive behind the company's new Zephyr, a nylon zipper that comes in various colors, the cardboard record player is being sent out to clothing manufacturers and retail stores. The idea is that when a pencil point is placed into a hole in the record and rotated, the zipper on the card "speaks for itself."

NO JOBS FOR HUMANS

Houston—As if substituting pigeons for salesmen (see p. 12) and plant mechanization weren't enough, Superior Furniture Manufacturing Co. is replacing human workers with chimpanzees. Marketers correctly lay much of the blame for the profit squeeze on the high cost of labor. But, the company's plan to substitute two chimps for one human worker on those simple but boring assembly line operations seems a pretty drastic solution. Of course, the fact that the plant manager has written a book about a factory saved from bankruptcy by a labor force of chimps may have a bearing on the new hiring policy. He's still looking for a publisher.

LOOK AT YOUR MEDIA

New York—For what is probably the most objective study of the circulation and rate trends of some 61 ABC-audited consumer and farm publications, consult the Association of National Advertisers, Inc., report. The recently published study covers the years 1940 to 1959 and will cost nonmembers of ANA $15.00 a copy. The report covers such important factors as: cost per page per thousand circulation; circulation rate basis and page rates; average paid circulation and proportionate use of various circulation methods.

INCREASED SHELF LIFE

New York—A switch from cellophane wrapping to a foil laminated overwrap increased the freezer shelf life of seafood for Continental Seafoods, Inc. The company changed the packaging on its Langosti seafood several months ago and reports favorable results.

SECRETARIES BEWARE

Kyoto, Japan—Secretaries are given fair warning that they may become expendable in the near future. A

MARKETING on the Move

(continued)

voice typewriter was recently demonstrated by scientists of Kyoto University's Engineering Department to visiting members of the World Acoustic Society. The electronic typewriter is said to be capable of writing words in combinations of consonants and vowels and more than 100 monosyllables. Since it types only in romanized Japanese, the threat so far is only to Japanese typists.

MOWERS FOR STUDENTS

Waukegan, Ill.—The high school student market will be exploited by of all things – a power mower manufacturer. Outboard Marine Corporation's Lawn-Boy Division, through a program entitled Lawn Boss, stimulates high school students to earn extra money during summer vacations by mowing lawns. The company provides enterprising young lads with caps and shirts (complete with company insignia), receipt forms, accounting record books and promotional material. The hitch: In order to qualify for the program, all a student has to do is buy a Lawn-Boy mower. He can pay cash or buy it through local dealer financing called Student Income Loans.

ARTIFICIAL OBSOLESCENCE

Chicago—While he may be guilty of a little dead-horse beating, Maytag Company's president, George M. Umbreit, was nonetheless accurate in his description of artificial obsolescence as a deterrent to customer satisfaction in the appliance industry. In a keynote address to the eighth annual industry-wide Parts & Service Conference, he pointed to his company's 53-year-old policy against artificial obsolescence and gave several reasons why others should follow Maytag's example. "Annual model changes shake up manufacturing processes, and new models every year will obviously lead to customer servicing problems."

THE PROPER BALANCE

New York – How much of the advertising dollar should be spent on creating product awareness and how much on building a favorable attitude? Richard Cullen, general sales manager of the Ladies' Home Journal, raised the question in a recent talk. He pointed up the four learning

MARKETING on the Move

(continued)

thresholds through which good advertising must take the consumer: awareness of the product; knowledge of it; favorable attitude and desire to buy. Emphasizing the need for good advertising balance, he went on to say that TV creates product awareness more effectively than any other media, while printed matter imparts a more thorough product knowledge.

AD DRAWS TOO WELL

Houston — All marketers should have these problems. There's some speculation that the Houston Sports Assn. ad seeking future major league baseball players might draw too well. The ad appears in The Sporting News and cautions all prospective players to look into the association's offers before signing with another club. A similar ad run earlier for the Kansas City Athletics got such a flood of applications that the snowed-under club had to discontinue the ad.

MINIATURE FACTORIES

Dayton, Ohio — Want to bring first-hand demonstrations of product construction to potential customers' doorsteps? Follow the example of Dayton Tire & Rubber Co. Its salesmen carry portable tire-building machines and curing presses scaled down to one-twentieth the size of normal equipment. The machines make miniature tires on the spot at sales meetings, exhibits, and shows. The company raves about the success of the tiny tire builders as a sales training technique and as a public relations and sales promotion tool.

WILL YOU GET SPACE?

New York — Super market shelf space is at a much greater premium than it was six years ago. The point was brought out by a recent 13-chain study made by Chain Store Age recently. Of the 6,000 new items, brands and sizes brought out in the course of a year, 415 are added to today's shelves — and 355 old items come off the shelves. That means the total increase in the number of items on the shelves is 60. A similar study conducted in 1954 on eight chains showed 270 new items going on the shelves and 230 coming off — a total increase of 40 items.

-SM- LETTERS TO THE EDITORS

In planning this issue we checked with readers to see the extent of their use and understanding of SIC (Standard Industrial Classification). Here are some of their answers:

starting point in sales planning

In most of our market studies, we start with the "Census of Manufactures" and get the basic information on the industry in which we are interested. This may or may not find its way into the final report. As you know the 4-digit SIC classifications are rather broad for many marketing purposes.

However, the 4-digit level of aggregation does provide a starting point, and in many cases it is sufficiently detailed to provide a sound estimate of the size of the potential market.

LEE GUNLOGSON

Director of Market Research
Carrier Corp.
Syracuse, N. Y.

performance vs. potential

. . . We use [County Business Patterns] for developing performance against potential for our distributor territories, and we also use them for aiding us in making up what we call our customer and prospect books. We have a book for each salesman which lists every customer and known prospect in his territory with the recommended number of calls for each. We cross-check this with County Business Patterns to be sure we have not overlooked any prospects.

CHARLES OLIVER

Technical Products Division
Corning Glass Works
Corning, N. Y.

new user

. . . We will just be starting to use statistics on number of plants and number of employees in our sales/-advertising planning in the next few months.

JAMES E. BORENDAME

Director of Marketing
Fansteel Metallurgical Corp.
North Chicago, Ill.

verification of data

. . . We have still only used SIC data informally. The results pretty well verified our information from other sources concerning our percentage of acceptance to industries which could use our product on an original equipment manufacturer's application.

MICHAEL J. MCCAUGHEY

General Sales Manager
Tuthill Pump Co.
Chicago, Ill.

a check on potential

. . . These statistics [on number of plants and number of employees] are used only indirectly to check completeness of our knowledge of potential users. It is upon this independently derived knowledge rather than on factoring these statistics that our sales and advertising planning is based.

K. S. LEWIS

Diamond Alkali Co.
Cleveland, Ohio

not yet, but . . .

. . . No, we do not use statistics on plants and employees. However, this doesn't mean that we shouldn't use these statistics.

CORMAN J. DIEHL

Advertising Manager
Wyandotte Chemicals Corp.
Wyandotte, Mich.

the more data, the better

We believe the release of a 7-digit code will go far toward promoting more accuracy in analysis. Despite company protests that such code refinement would reveal too much about their operations, it is felt that, in this age of mechanical delineation of markets, generalities have no place. Certainly, the more intelligence is acquired and published about national markets, the greater our chance of improving the economy.

One thing should be said in praise of persons in SIC-coded plants who respond to inquiries made of them continually by marketing research facilities like ours. It is constantly amazing to us, and greatly appreciated by us, to get such prompt and complete information. Despite constant harassment with mail, phone, telegraph and face-to-face questioning, plant personnel cooperate at least as well now as they did when survey work had just begun to become popular.

N. J. RODES

Senior Analyst
Commercial Research Division
Crucible Steel Co. of America
Pittsburgh, Pa.

Why the major shift

in America's reading habits is important news to more and more advertisers

Something's happening in America that's beginning to have an influence on more and more media selections. It's the major shift in reading habits.

Today, more than ever, reading habits are motivated by the need to be and the desire to be informed. This can be seen by comparing growth rates of all types of publications available to the American people during the past decade.

Away out in front are the news magazines.

SHIFT IN AMERICA'S READING HABITS SEEN IN RECORD GROWTH OF "USN&WR"

(Circulation growth, 1948-59)*

"USN&WR"..........UP **211%**

News and Management Weeklies .UP..**63%**

All ABC Magazines ....UP..**31%**

**1948—the first year "U.S.News & World Report" appeared in its present form.*

Source: Magazine Advertising Bureau and comparison of publishers' statements to Audit Bureau of Circulations.

Demand for important news

Never before have so many people been so intensely interested in the developments of government, of business, of science. Never before have they realized how much these developments affect the way they live and the way they make a living.

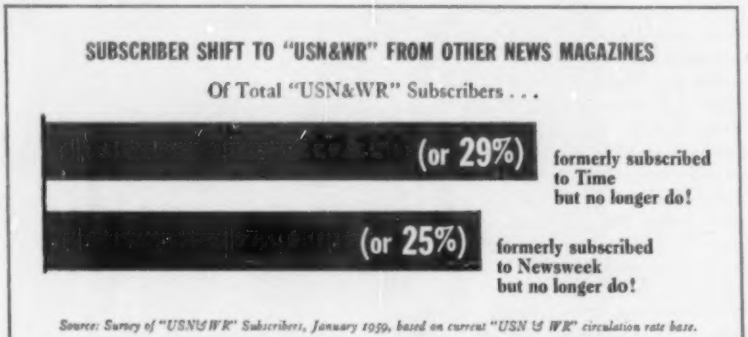
As a result, they demand and expect news that penetrates and clarifies the significant events and pressing issues of the times. They demand and expect news that answers urgent questions. They demand and expect news they can rely on to guide their business and personal plans and decisions.

Which helps explain why "U.S.News & World Report" has more than tripled its circulation in just 12 years. It is the one magazine in America that concentrates exclusively on the essential and useful news. Completely, too, with more pages of news than any other news magazine.

Shift within a shift

What makes the tremendous growth of "U.S.News & World Report" even more significant is this: it has attracted a large percentage of its subscribers *from the two other news magazines.* Specifically, 29% formerly subscribed to Time, and no longer do. Also 25% formerly subscribed to Newsweek, and no longer do.

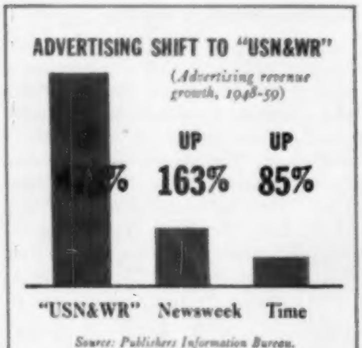
This shift is natural and spontaneous. "U.S.News & World Report" has the most *voluntary* circulation operation in its field. Content *alone* attracts and selects its audience—assuring not only thorough readership but high advertising visibility.



Source: Survey of "USN&WR" Subscribers, January 1959, based on current "USN & WR" circulation rate base.

More than readers—*customers!*

And the class of people drawn to this kind of magazine are usually those with the bigger responsibilities and better incomes. Of the three news magazines, "U.S.News & World Report" has the *highest* concentration of managerial and professional families and the highest average family income—$15,496. Here are *customers*—the kind of people who do the buying for business; the kind of people who account for the buying of just about all major-purchase consumer products and services.



Source: Publishers Information Bureau.

A non-duplicated market

These are busy people. They rarely have time for more than one news magazine. Close to a million of them *do not* subscribe to Time, and more than a million *do not* subscribe to Newsweek.

Clearly, "U.S.News & World Report" provides a non-duplicated market of responsible, high-income people no advertiser can afford to overlook. No wonder it's also the target of a pronounced *advertising shift*, expressing a growing conviction that this is, indeed . . .

The most important magazine of all

Source: "USN&WR" Subscriber Preference Study, 1959.

U.S.NEWS & WORLD REPORT

America's Class News Magazine

Now more than 1,175,000 net paid circulation

Advertising Offices: 45 Rockefeller Plaza, New York 20, N.Y.
Other Advertising Offices in Boston, Philadelphia, Pittsburgh, Cleveland, Detroit, Chicago, St. Louis, Los Angeles, San Francisco, Washington and London.

WORTH WRITING FOR . . .

A selection of noteworthy studies of markets, media, consumer buying trends, product and service developments that can pay off for you.

The Industrial Market

A report which reveals that the men who place the biggest orders for industrial goods have taken cover from salesmen. These big buyers, and other chief influences of big purchases, are more deeply hidden in management hierarchies of larger corporations than ever before—often behind unrevealing titles. The trend is growing. The report mines the latest sources for figures that show the dimensions, concentration and geography of today's changing industrial market. In 1959 U.S. industrial production hit $164 billion, up from $105 billion in 1947. Of total sales, a mere 236 firms account for 32%. The U.S.'s industrial belt has half the nation's people but accounts for three-quarters of its manufactured products. A number of figures have been projected to shed light on the future. Industrial production is likely to zoom by 60% between now and 1970. Write to Dr. Edgar Gunther, Director of Market Research, Dept. SM, Fortune, 9 Rockefeller Plaza, New York 20, N.Y.

The Syracuse Market

A study of this 15-county market of 1.4 million people, with total retail sales of $1.7 billion. Data cover: population—15-county, Standard Metropolitan Area, ABC Zone; households; food store, drug store, furniture-household, general merchandise and automotive sales; industry and employment; number of grocery stores and dollar volume; chain and cooperative groups; number of drug stores; test-market characteristics. Write C. S. Hurley, Advertising Director, Herald-Journal and Post-Standard, Dept. SM, Syracuse, N.Y.

Newspaper Markets

Fourth annual data book which defines, measures and maps the markets served by the daily newspapers published in each of the nation's metropolitan areas. In four sections, it (1) lists data on population, buying power and retail sales for each newspaper market, in order of size, with cumulative percentages of the national total, compared with metropolitan data in each case; (2) lists alphabetically (by state) each newspaper, coded to show whether it is morning or evening, has separate or combination or optional rates, along with its current circulation and open-line rate, and availability of color; (3) includes individual maps, arranged alphabetically, coded to show the counties covered by each group of metropolitan dailies; (4) shows readership norms for newspaper advertising, separately for men and women, by size of ad, by type of product. Write Alan S. Donnahoe, Executive Vice President, Richmond Times-Dispatch and The Richmond News Leader, Dept. SM, Richmond, Va.

A New Major Market

Called Car-Va, the area includes the Carolinas and Virginia, with sales potential which ranks among the top markets in the country. The presentation compares Car-Va with other regions and points up the major marketing differences, revealing that in terms of total retail sales, food and drug sales, income per household, Car-Va is as rich in sales potential for consumer products as is the New England area of Connecticut, Massachusetts and Rhode Island. Write Robert H. Teter, Vice President and Director of Radio, Peters, Griffin, Woodward, Inc., Dept. SM, 250 Park Ave., New York 17, N.Y.

ARF Publications

Bibliography arranged by type of publication: appraisals, consultations, supervised studies, general publications, conference proceedings, speeches, reprints. Annotations describe the contents, title and date of each item. Write Dept. SM, Advertising Research Foundation, Inc., 3 E. 54th St., New York 22, N.Y.

Bankers' Reading Habits

A survey conducted by Walter Gerson and Associates, Inc., among members of the American Bankers Assn. The purpose: to determine the comparative readership of eight major magazines. The magazines: Business Week, Fortune, Life, Look, Newsweek, The Saturday Evening Post, Time, U.S. News & World Report. Write Norbert Hofman, Jr., Dept. SM, Newsweek, 444 Madison Ave., New York 22, N.Y.

Sales Aids from Advertisers

Have you written for these booklets or samples described in recent advertisements in Sales Management?

Gift Food Pacs: Four-color catalogue showing over 25 gift food pacs. Dept. SM, Mickey Houston, Inc., 79 S. Water Market, Chicago 8, Ill.

Leasing Cars or Trucks: A fleet plan backed by 24 years of successful experience. Dept. SM, Wheels, Inc., 6200 N. Western Ave., Chicago 45, Ill.

Binders for Advertising and Sales Promotion Material: Catalogue and advertising covers showing dozens of ways to present and tell a selling story to customers. Dept. SM, Yawman & Erbe, C. E. Sheppard Co. Division, 44-28 21st St., Long Island City 1, N.Y.

The Hospital Market: A report on market highlights. Dept. SM, Hospitals, Journal of the American Hospital Assn., 840 N. Lake Shore Drive, Chicago 11, Ill.

Select-A-Market Program: Details on how nine kinds of advertisers can benefit from it. Dept. SM, The Saturday Evening Post, Independence Square, Philadelphia 5, Pa.

Pontiac, Mich., Market: Fifty-eight-page study conducted by Benson & Benson, Inc., in consultation with Advertising Research Foundations, Inc. Dept. SM, The Pontiac Press, Pontiac, Mich.

Lithographed Metal Containers: Information and samples of brand-identification containers. Dept. SM, J. L. Clark, Rockford, Ill.

Direct Mail and Sales Promotion: Descriptive booklet about how leading companies plan, create and produce direct mail and promotion. Dept. SM, Dickie-Raymond, 225 Park Ave., New York 17, N. Y.

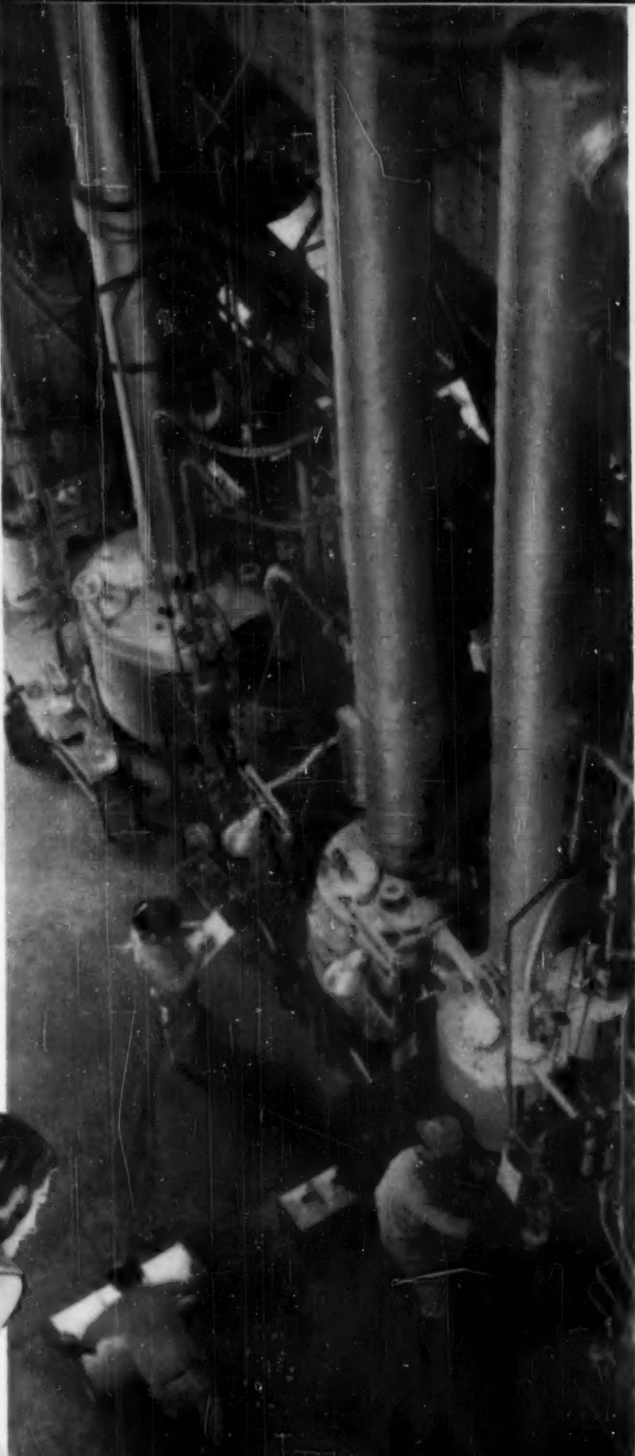
Major U.S. Markets: 1960 analysis of all 300 Metropolitan Markets. Dept. SM, Greensboro News and Record, Greensboro, N.C.

The Extra Unit Family: A study of the families that buy the second car, refrigerator, home, television and radio set, phonograph, camera. Dept. SM, Holiday Magazine, Independence Square, Philadelphia 5, Pa.

WONDERFUL WORLD OF FRAGRANCE

With creative research and modern production facilities in every major marketing area of the free world, IFF develops and produces the persuasive fragrances that give sales appeal to successful consumer products the world over.

The right fragrance for your new product ... an exclusive IFF creation.



Still Room at the IFF plant, Union Beach, N. J., where the most advanced high column vacuum distillation equipment produces, in quantity, the purest aromatic materials for making fine fragrances.

iff

van Ameringen-Haebler *division*

INTERNATIONAL FLAVORS & FRAGRANCES INC.

521 West 57th St. • New York 19, N. Y.

Leading Creators and Manufacturers in the World of Fragrance

ARGENTINA AUSTRIA BELGIUM BRAZIL CANADA ENGLAND FRANCE GERMANY HOLLAND INDONESIA ITALY NORWAY SOUTH AFRICA SWEDEN SWITZERLAND

Major Companies Report:

'HOW WE SPOT TURNING POINTS IN BUSINESS'

A question sales heads of major companies frequently raise with their fellow executives is, "How do you spot near-term turning points in business?" So we have turned to 16 professional economists on corporation staffs, in industry associations, and in other affiliations, to find out which factors they rely upon in making economic forecasts to management.

We did not ask them whether the nation now is in or near a recession.

We did ask each to identify the half-dozen or so factors which he finds most meaningful for the near-term (3 to 12 months) in spelling a change in the economy of the nation as a whole. We also asked each to identify the factors of prime importance in spotting near-term turning points for his company or his industry.

You can select the factors which are most applicable and use them as guides for spotting turning points for your company.

"We Watch Prices of Sensitive Commodities"

By Ira T. Ellis, economist, E. I. du Pont de Nemours & Co.

"We follow the 'leading' indicators developed by the National Bureau of Economic Research as the most reliable indicators of imminent changes in the trend of business activity.

"We also note the level of new orders of durable goods manufacturers in relation to the current sales level. Another indicator is the projected trend of business spending for new plant and equipment, as provided by the U. S. Department of Commerce and the Securities and Exchange Commission, and by the McGraw-Hill organization. We also follow the trend of housing starts.

"Finally, we watch prices of sensitive commodities—basic raw materials whose production and consumption are world-wide, and therefore whose prices fluctuate sensitively with changes in supply and demand."

"The Ones of Prime Importance"

By B. J. Korb, manager, Market & Economic Research, Koppers Co.

". . . the things we watch, for cyclical changes in business, are similar to those used by most other firms. We watch the 'leading indicators' of the NBER; but in addition, there are a number of other series that seem to be useful.

"For example, inventory-sales ratios appear to be useful, as does the ratio of inventory to new orders. Of these two, the latter seems somewhat more useful. In addition, we watch such things as paperboard new orders, construction contract awards, plant and equipment surveys, and surveys of consumer intentions. A relatively new series which looks to be very useful is the new Capital Appropria-

(continued on next page)

'HOW WE SPOT TURNING POINTS IN BUSINESS'

(continued)

KOPPERS' B. J. Kerb: "The things we watch are similar to those used by most companies: NBER indicators plus others related more to our business."

tions Survey of the NICB.

"Of these, the ones which seem of prime importance to our business are construction contracts, the inventory ratios, and the plant and equipment expenditures."

"Once the Critical Factors Are Isolated"

By Wilson Wright, economist, The Procter & Gamble Co.

"At different times, the factors which bring about major changes in the trend of business activity are quite different. For this reason, we attempt a comprehensive analysis of the economic situation, in order to try to understand what are the particular critical factors in any given period. Once the critical factors are isolated, these may be made the major objects of attention.

"After following this kind of procedure over a period of a good many years, I have found that the things which bring about major changes in business activity are quite different in different periods, and I would be quite unable to provide a short list of a few things to watch, which would be of any use to a person attempting to assume responsibility for the conduct of business operations.

"As an example, I may suggest that, in the present, the willingness of foreign investors to keep their funds in the United States is an important factor in the outlook for business. This particular factor has not been of much consequence for a very long time."

"A Growing Obsession with Near-Term Forecasting"

By Leo Teplow, assistant vice president, American Iron and Steel Institute

(How do I spot near-term turning points in business?) "In my case, I don't.

"In fact, it seems to me that there is a growing obsession with near-term forecasting which tends to exaggerate swings in the business cycle. Note, for example, the rosy expectations at the turn of the year with the current gloom—neither of which is based on much more than hunch or general climate.

"If businessmen would concentrate their energy on giving the customer more value for his dollar rather than spending time gazing into rather cloudy crystal balls, the economy would probably sail on a more even keel—and at a somewhat higher speed."

"Of Greatest Forecasting Significance to Our Company"

By A. G. Matamoros, general manager, Economic and Marketing Research, Armstrong Cork Co.

"We should like to think that we have been reasonably successful in spotting 'near-term turning points in business,' although our batting average is certainly far from perfect. Let me say at the outset that we have found no business indicator or group of indicators which magically and with precision foreshadow economic peaks and troughs. Rather we rely on a number of business research tools and techniques in our forecasting of general business activity, recognizing that the direction which the economy takes is most often the net result of conflicting movements within its sectors and that no one technique of analysis will provide all the answers all the time.

"One of the many techniques which we employ we term the 'key factor' approach whereby we analyze orders, shipments and backlogs in the 'barometric' paperboard industry, new and unfilled orders for durable goods, sensitive commodity prices, residential and nonresidential contract awards, and common stock prices.

"Of greatest forecasting significance to our company are construction contract awards and consumer intentions and attitudes surveys conducted by the Survey Research Center of the University of Michigan and the NICB.

"You recognize, of course, that there is no pat answer to the business forecasting problem. The only potentially successful approach for the individual company is that which carefully relates anticipated shifts in key environmental variables to internal operations, organization, policies, and plans."

"Have Particular Relevance to Capital Goods Industries"

By B. J. Bowlen, economist, Business Research Department, Caterpillar Tractor Co.

"My answers to your questions are intended to have particular relevance to capital goods industries; other indicators might be more appropriate to consumer goods forecasting.

"The factors which I consider to be particularly useful in the near-term business forecasting are:

"1. Orders for manufacturers durable goods
"2. Sales of manufacturers durable goods
"3. Inventories of manufacturers durable goods
(Each of these appears monthly in the Commerce Department's *Survey of Current Business*)
"4. Construction contract awards
"5. Plant and equipment expenditures

"The relationship between orders and sales of manufacturers durable goods has been an important leading indicator in the postwar period. A decline in orders below the sales level has preceded economic downturns by several months. We compare sales and inventories of manufacturers durable goods, and have found in normal times that a fairly fixed ratio

PROCTER & GAMBLE'S Wilson Wright: "The things which bring about major changes in business activity are quite different during different periods."

DU PONT'S Ira T. Ellis: "In addition to usual indicators, we watch prices of basic raw materials whose production and consumption are world-wide."

ARMSTRONG CORK'S A. G. Matamoros: "Of greatest significance to us are construction contract awards and consumer intentions and attitudes surveys."

exists. A desire to cut inventories indicating a less buoyant economy is noted when sales decline relative to inventories and vice versa. Contract awards have special relevance to suppliers of construction machinery. We obtain our plant and equipment expenditure expectations from the survey conducted by the SEC-Commerce Departments."

"'Lead' Series Not Especially Impressive"

By Robert J. Landry, Dun & Bradstreet, Inc.

". . . In our forecasting work we have never given high priority to the behavior of 'key' series, relying instead on analysis of as many elements entering into the situation as we are able to treat. In our experience, the record of work with small packets of 'lead' series is not especially impressive, at least so far as concerns the timing problem."

"The Role of 'Conservative Bias'"

By Emerson P. Schmidt, director, Economic Research Department, Chamber of Commerce of the United States

"The test of a forecaster is his ability to forecast a turning point. However, there is a human tendency for individuals to avoid interpreting a change in the level of a statistical series as a portent of a turning point in general business activity. It is much easier—and more comforting—to assume a continuation of relative stability, or the continuation of a trend rather than go out on a limb forecasting a major change.

"This conservatism on the part of the business analyst tends to reenforce a conservatism on the part of the statistician preparing the data. Many statistical series, especially in their preliminary form, contain a measure of estimation. In order to get the data out as soon as possible, a number of statistical series are published in preliminary form with only part of the returns in. Statisticians preparing the data will estimate the total from this incomplete return—and they will, in many cases, tend to iron out radical changes indicated by the partial sample as being improbable or unrepresentative. Only when all of the data are in—sometimes one to two months later—will it be obvious whether a real change in level—a turning point—has taken place. How important this 'conservative bias' really is, has never been determined. It is just another thing to keep in mind when viewing a forecast of continuation of present levels of business activity."

"These Series Call the Turns . . ."

By George Cline Smith, vice president and economist, F. W. Dodge Corp.

"A statistical series which is of particular importance in our own work, and probably just as important in any type of general economic forecasting, is our own series on construction contract awards.

"This is not intended as a special plug, but is based simply on the facts of the case. As you may be aware, two of the famous eight leading indicators developed by the National Bureau of Economic Research are our own construction contract figures, for floor area of residential and for a combination of industrial and commercial building. These series call the turns in construction extremely well, as might be expected, but according to the National Bureau's work, they also serve as some of the best indicators of turns in the general economy.

"We use dozens of other series, and it is difficult to select only a few which are extremely helpful. Among them are the Commerce Department's quarterly Survey of Current Business plant and equipment spending plans, The Federal Reserve Board's Index of Industrial Production, the Census Bureau's series on housing starts, and various statistical series covering interest rates.

"I am personally inclined to place emphasis in assessing future turning points on series which reflect planning and attitudes on the part of businessmen and consumers. Such series include the plant and equipment plans, construction contracts business appropriations, consumer attitudes, and similar series which relate directly to future events rather than past history. Many of the most popular series merely reflect events of weeks or months past, which themselves reflect decisions and attitudes which occurred even further in the past."

(continued on next page)

'HOW WE SPOT TURNING POINTS IN BUSINESS'

(continued)

"Must Consider Combined Effect of All Indicators"

By Colin G. Clark, director of research, The Econometric Institute, Inc.

"Our experience in this Institute over a long period of years (the Institute was established in 1938) suggests that it is a mistake to try to find half a dozen or so factors particularly meaningful for detecting turning points in business. We have built up a system of equations which we use for preparing our forecasts, and we do not think that any forecast can be prepared until the combined effect of all the factors has been considered."

"We Intensify Our Study . . ."

By Martin R. Gainsbrugh, chief economist, National Industrial Conference Board Inc.

"We use a series of approaches at The Conference Board to help us in determining turning points in the business cycle.

"We begin with the leading indicators drawn from the basic studies of the National Bureau of Economic Research. We have also developed several leading indicators of our own including the Board's diffusion index, summarizing the behavior of twelve important indicators of activity. Our recently published 'Help Wanted' index seems to be a sensitive indicator of conditions in the labor market. These measures are suggestive but not necessarily conclusive indicators of cyclical changes and need to be confirmed by broader analysis.

"We, therefore, secondly, make intensive use of foreshadowing statistics drawn from expectational surveys of spending plans. These include our surveys of capital appropriations sponsored by Newsweek and The Iron Age as well as the continuing surveys of consumer attitudes and buying plans we prepare for Newsweek.

"Thirdly, we engage in intensive statistical research in individual areas of demand, to attempt to establish the major determinants of spending. From such research we attempt to appraise through mathematical equations the relative 'normalcy' of spending for such key items as capital goods and inventories.

"Finally, since we still believe that business analysis as we approach turning points in the cycle remains more of an art than a science, we intensify our study of such qualitative considerations as monetary and fiscal developments here and abroad, trends in prices, costs and profit margins, etc. The emerging structural changes in the economy are weighed for their expansionary, sustaining or contracting significance. This phase of business analysis is admittedly the most difficult, and highly subjective. Without it, however, the three more mechanical approaches described above often yield misleading answers."

"Indications of Intent . . . Are More Significant"

By Burton N. Behling, economist, Association of American Railroads

"How do you spot near-term turning points in business? A short answer is that I don't and neither does anyone else. The most difficult, and I say impossible, aspect of forecasting is the attempt to predict when turning points will occur.

"Statistics which are commonly used as 'economic indicators' record past events. By the time they are collected and issued they may reflect conditions of one to several months past. The usual indicators also are subject to margins of error that may be considerable, a circumstance that is too often overlooked.

"Notwithstanding all this, we must, of course, endeavor as best we can to make judgments about the future. The point I would stress is that indications of intention and anticipation are likely to be more significant with respect to the near-term outlook and turning points than are statistics with respect to past events. Therefore, I think that the kinds of things to be watched include:

"1. Declared intention with respect

21 Popular Indicators

Among the economic indicators with the largest following among professional economists are those classified by the National Bureau of Economic Research. Inc., as in the "leading group," the "roughly coincident group," and the "lagging group."

In general, the eight indicators in the "leading group" have reached their cyclical highs or lows several months before the business cycle peaks or lows.

The eight indicators in the "roughly coincident group" have their highs and lows at approximately the same time as business in general.

The five indicators in the "lagging group" reach their peaks and valleys a few months afterwards.

The National Bureau of Economic Research, Inc. (a non-profit organization whose current president is Dr. Arthur F. Burns, first chairman of President Eisenhower's Council of Economic Advisors), does not publish periodic data or charts on these 21 indicators. Such information is published and sold on a monthly basis by several private organizations.

The 21 indicators are:

LEADING GROUP

1. **Business failures, liab., indus. and comm.**
2. **Common stock price index, industrials, Dow-Jones**
3. **New orders, durable-goods mfg. industries, value**

to business capital expenditures,

"2. Volumes of new orders in various lines of business, and

"3. Inventory trends in relation to current sales."

"Judgment Is Still Likely to Be as Important as Data"

By Miles L. Colean, economist, Washington, D.C.

"I doubt that there are any specific statistical series which are either accurate enough or timely enough to give a dependable indication of what lies immediately ahead. The dispute among economists at the present time should be evidence enough that this is so. Moreover, there is always a good chance that some extraneous element like the Pennsylvania Railroad strike will thrust itself into the equation.

"I may suggest that the best thing to do is to take into account every element on which there is data, weigh it as best one can in the light of current conditions, and watch the trends that are revealed with the utmost care and skepticism. In the final analysis, judgment is still likely to be as important as data."

"Judgment and Feel Play an Extremely Important Part"

By Benjamin F. Stacey, vice president, The First National Bank of Boston

"If I had to put down a list of factors which I consider important in spotting turning points, it would certainly include new orders and backlogs of manufacturers particularly of durable goods. Inventories by stage of fabrication for manufacturers, and by industrial classification, that is manufacturers, wholesalers, and retailers would be high on any such list. The third area is construction contract awards, especially for heavy construction. The fourth area would be money supply and the performance of business loans. The fifth factor would be industrial production.

"As you will observe, this list comes pretty close to that of the leading indicators. The performance of this group is erratic. They do not all move in the same direction at the same time. They give false starts and I must emphasize most strongly that judgment and feel play an extremely important part in the intelligent use of these factors.

"A device which I find helpful in connection with these items and other similar measures such as personal income, employment, trade, and the like, is the rate of change from year to year. A study of the patterns of percentage changes in such measures over the like month of the previous year can be very suggestive of trends in the economy."

"These Series Have a Substantial Following"

By Ralph Robey, economic advisor, National Association of Manufacturers

"The National Bureau of Economic Research has done more than anyone else in studying the business cycle and attempting to develop methods for forecasting it with accuracy. The Bureau has various series which it has found normally precede a business downturn, another group which moves simultaneously, and still another group which is supposed to lag. These series have a substantial following.

"As for myself I read everything that comes along and by some means arrive at a judgment. I also talk to numerous persons and follow political developments with care. It is not an easy task and there always is an element of luck in whether one is correct."

"Economic Indicators I Most Frequently Use"

By Murray L. Weidenbaum, corporate economist, Boeing Airplane Co.

"The economic indicators that I most frequently use in this connection are the following:

"1. The trend of the Gross National Product, particularly the quarterly rate of change.

"2. Federal Reserve action with reference to easing or tightening credit.

"3. The various surveys of business plant- and equipment expenditures such as the forecasts by the Commerce Department, McGraw-Hill, and the National Industrial Conference Board.

"4. University of Michigan surveys of consumer buying intentions.

"The economic factors of primary importance to a major military supplier such as the Boeing Airplane Company are of a more specialized nature than those used to gauge the outlook for the national economy as a whole. The major indicators of future military spending patterns are the following:

"1. The recommended new obligational authority for the Department of Defense in the President's budget transmitted to the Congress each January.

"2. The level of appropriations to the military establishment actually enacted by the Congress.

"3. Changes in the rate of military orders, and,

"4. International incidents, such as the Russian launching of a Sputnik, which may lead to changes in each of the three factors above." ◆

4. **Residential building contracts, fl. sp.**
5. **Comm. and indus. building contracts, fl. sp.**
6. **Average workweek, mfg.**
7. **New business incorporations**
8. **Index of spot market prices, basic commodities**

ROUGHLY COINCIDENT GROUP

9. **Employment in nonagricultural establishments**
10. **Unemployment**
11. **Bank debits outside New York City**
12. **Freight carloadings**
13. **Industrial production index (incl. utilities)**
14. **Wholesale price index, excl. farm prod. and foods**
15. **Corporate profits after taxes (Q)**
16. **Gross National Product, current dollars (Q)**

LAGGING GROUP

17. **Personal income**
18. **Sales by retail stores**
19. **Consumer installment debt (end of month)**
20. **Manufacturers' inventories, book value (end of month)**
21. **Bank interest rates on business loans (last month of quarter)**

16 Case Histories on Plant and Employ

"4-Digit SIC Opens up a New Phase

SIC as applied by the Cambridge Wire Cloth Co.

We started our present market research program in 1955, using plant employment as the yardstick of comparison. At that time the following steps were taken:

1. All orders were classified in accordance with SIC (2 digit).

2. Percentage calculations of our sales in the various SIC categories were made to give us the "industry weight" of each classification.

3. Using the McGraw-Hill "market planning workbook," we multiplied "total employees" percent by the above "industry weight" to give us the potential percentage of business that could be expected from each area and territory.

At this time our sales were being handled by seven territorial offices, all located in major cities. This original study revealed that some of the territories, considered our best performers, were not so good when the potential was considered. Definite area weaknesses were revealed that indicated better coverage was needed; and subsequently we re-arranged our territories to include three new ones. We now have ten sales territories and the potential of each ranges from 8% to 12%.

This employment yardstick has enabled us to spot minus areas immediately so that corrections can be made after determining the causes.

We use the "employment" potential as a prime consideration for estimating territorial quotas. Of course, the final quota is seasoned with other considerations, such as past performance, proximity to our plant, local competitive conditions, etc.

The study also revealed territorial weaknesses in certain industries, instigating market surveys that showed we were not reaching a large number of companies that were using our product.

The availability of 4-digit SIC information has opened up a new phase in our market research. To put it briefly, the original 2-digit SIC enabled us to use the shot-gun approach which covered a broad area of industries. Now, with the 4-digit SIC it is a rifle approach, pinpointing actual plants that use our product.

Our first approach to the 4-digit SIC was to mark in the Government manual the specific types of plants in the various industries that we know are using our product. Then we obtained a complete library of state manufacturing directories, most of which give not only individual plant employment, but also the SIC numbers in four digits. We decided to include in this study all plants in the categories we were interested in employing over fifty people. Knowing the proper categories, and minimum employment to be considered, a special task force was employed to mark each plant listed in the state directories that met the specified requirements. Our present plans call for each of the selected companies to be contacted either by letter, phone, or personal contact.

At the present time we are conducting a Western Union survey in the state of Rhode Island. In this particular case we are using the Dun & Bradstreet market study directory of Rhode Island, and we had to use capital rating as the yardstick instead of employment. However, all of the other states will be surveyed on the employment basis.

Our present mailing list of 45,000 is being reviewed and over half the names will be deleted because they do not measure up to the requirements we have set for prospective customers. However, they will be replaced with new names that we know definitely are prospective customers. We estimate that this move alone will save us approximately $12,000 annually. We will continue to mail literature to every one who requests it, but new names will not be added to our mailing list unless they meet the requirements of employment and type of plant.

Use of
ment Data

These case histories were written by marketing executives in companies that have used SIC (Standard Industrial Classification) codes to solve a variety of sales/advertising problems.

The companies involved spell out the benefits they enjoy from SIC, and they frankly admit the limitations of SIC, in some instances, in application to their particular problems.

Several companies report in detail on how they use SIC in deciding upon markets in which to advertise and on media to use. This use of SIC is likely to grow rapidly in this decade as more companies identify their customers and prospects by SIC codes.

'After We Establish Market Values'

SIC as applied by Westinghouse Electric Corp., Industry Market Planning Headquarters Sales

From the number of employees data by SIC category, we develop indices which are applied to national market figures, to derive markets by smaller increments. These market values, of course, are tempered by management judgment in these areas in an effort to balance the relative efficiencies between plants. (Two plants, each with 1,000 employees, can vary widely in output—and apparatus requirements—if one is an old plant, and the other a new, automated plant.) After we establish these market values, we compare our sales to them, measuring relative changes in the markets and our sales position with respect to the markets.

In addition, we find the market figures thus derived helpful to us in analyzing our distributor coverage for those products which normally are sold through these channels.

Probably the greatest use we make of the Census of Manufactures data, however, lies in the many specialized studies we make. Here at Headquarters Sales, we are organized on an industry basis, which means that we are constantly studying specific industries. Plant employment data and data on number of plants are basic to these studies.

'Basis for Practically All of Our Potential Analyses'

SIC as applied by the Norton Co., makers of abrasives, refractories, grinding, lapping and gear cutting machines

Employment statistics have served as the basis for practically all of our potential analyses. Experience has shown that in most instances it is necessary to have employment in 4-digit Standard Industrial Classification detail. Consequently, the Census of Manufactures is a most useful tool.

Sales per employee values have been developed for each of the 4-digit Standard Industrial Classification groups of significance in the purchase of grinding wheels. These sales per employee values represent the annual dollar value of the grinding wheels expended by an employee in each of these industrial classifications. The sales per employee statistics were developed several years ago, so we are now updating these data.

Obviously, with such sales per employee statistics, it is possible to compute a potential for any 4-digit industrial classification for which employment data are available. The sales per employee value is, of course, an average figure. It applies to that hypothetical average employee of the U.S. as a whole. Thus, it must be borne in mind that error is incurred in any instances where this value is applied to the employment of any subdivision of the U.S. Experience has shown that on the state level the potential calculated for a given 4-digit SIC group and using the average sales per employee factor is reasonably reliable.

We have used employment data as the basis for evaluating potentials within several breakdowns. Among these are: by state, sales district, sales territory, industry, product group.

Further, the material has been used on a county level but only after the results have been confirmed by other methods. (continued on next page)

16 Case Histories on Use of Plant and Employment Data

(continued)

'Our Entire Ad Budget Is Allocated by SIC'

SIC as applied by Superior Tube Co.

Our entire advertising budget is allocated by major market (SIC). A sales analysis which is done each year indicates that 97% of our business falls into ten major (2-digit) SIC markets. In analyzing our sales in these markets we have established the historical pattern of the relative importance of each one to Superior.

In the case of advertising media, most publishers break their circulation by SIC and if they do not, we attempt to do it, based on the information they provide. After the publications have been selected and the rates figured, the percentage of the circulation by market is used to compute the dollars which will be spent in each of the markets the publication serves. As an example, a design publication could serve four general metalworking markets—50% in the electrical industry, 25% in the instrument industry, 15% in the aircraft industry, and 10% in machinery. Total space cost of, say, $8,000 is then prorated, using the percentage above. The amount of production costs to produce the ads is prorated in the same manner.

With direct mail, our lists are broken by market and the same study of potential is applied. Thus the total direct mail budget is allocated by SIC.

Trade shows are usually vertical promotions, but if they are general, such as the Metal Show, a study of the show attendance records can again be broken by market served.

Our publicity program is a little more difficult. Since much of the publicity ties in with new products and subdivisions of major markets, the rating of projected case history stories, feature stories, and new product stories by dollars requires careful study and tie-in to management objectives.

To support all the promotion programs above, we require a lot of technical literature. The emphasis placed on each market in the rest of the campaign determines how much literature is required to support the inquiries we seek. For example, 22% of our sales fell into the transportation (aircraft) industry—SIC 37—and the previous year we had spent 16% of our total advertising dollars in this market. Based on the size of the market and the potential, and weighing it with other markets, this year we increased the budget to 19%. We needed to include more space advertising, direct mail, trade shows, publicity activity and additional product literature to support the above.

The budget for each market is prepared, based on the task method, and then the entire budget is reviewed and adjusted, in relation to company objectives, historical sales pattern and a reasonable budget appropriation figure.

Other areas wherein we are applying SIC include the following:

1. Analysis and evaluation by 4-digit SIC of distributor sales territories for all U.S. This is very comprehensive. The biggest improvement made in 1960 is that this analysis incorporates the breakdown by plants making up to six different products at one location.

2. Preparation of an SIC manual for our full line of products.

3. Preparation of market literature by SIC.

4. Forecasting.

5. New product market research, geographically.

'A Top Manufacturing Area Is Not Necessarily a Top Sales Area'

SIC as applied by Arwood Corp., producer of castings

We are an investment casting foundry and as such we do not market any products of our own. Everything is produced to customer specification. Before the SIC was available the task of locating the various industries we should promote to was huge. With the SIC we can analyze our past sales and come up with an historical picture of our market. From that point we can promote to all companies in industries previously sold.

As soon as it was determined that our main markets had narrowed down to five or six main 2-digit SIC categories, we proceeded to promote to all companies in those categories (using the 4-digit SIC classifications) which had not been sold to before. We were thus able to open up many new fields for our castings.

The SIC also has a great deal of value in evaluating territories. For instance, it had been taken for granted that a top manufacturing area had been a top sales territory. However, when with the help of SIC we rated territories according to our own sales potential, what was once considered a first-rate selling market was downgraded to fourth- or fifth-rate. The Detroit area rates high as a manufacturing center, but this is due mainly to the automotive and allied industries. The potential for us in the automotive industry is very small, because of the nature of their requirements and of our type of production. It is this ability to streamline market data to your company's own needs that is the chief advantage of the SIC categories.

We have also used these industry classifications for the selection of media. With the magazines' presenting their circulation figures according to SIC, the advertiser can better judge which ones will reach the audience of his particular market.

'SIC Approach Raises Many "Whys"'

SIC as applied by C. A. Norgren Co., manufacturer of pneumatic products

By relating internal data to SIC industrial categories, we can obtain helpful answers to such questions as:

1. Which SIC industrial categories use Norgren products?

2. What is the market potential by SIC category and by sales territory?

3. What share of the total potential market does Norgren have?

The information developed by this approach does give a measure of market penetration. However, this approach raises many "whys" which remain unanswered. Therefore, we feel it necessary to supplement this approach with market research aimed at the untapped potential of Norgren's market.

'You Are Forced to Examine Publications Qualitatively'

SIC as applied by Greenfield Tap & Die, division of United-Greenfield Corp.

Our first flyer into this research asked only for SIC breakdown by number of plants and number of copies. While we were able to develop some very interesting data, in comparing publications, we found that some concentrated on larger plants, reflected this in their editorial complexion. In order to better evaluate this factor we added the breakdown by plant size.

Our own sales research data is compiled by SIC and plant size, so we have attempted to compare magazine circulation patterns with our own pattern. We should have two patterns, an actual sales pattern and a potential pattern. Unfortunately our actual sales cannot be accurately classified because we sell through distributors and it would be extremely difficult to get figures on ultimate use of our tools. However, our potential is easier to get and we hope is fairly accurate. In any event, we feel that our advertising is essentially aimed at the potential market so comparison of our potential pattern with magazine circulation pattern is valid.

Now, as to the cooperation of the publishers, this has been very good. The first year we could not get the information from many magazines as they just did not have it. We can now get it from all but one as far as SIC is concerned.

As for breakdown by plant size, several magazines still cannot give it to us but most of these are working on it and are either installing electronic machinery or are planning to. We hope that in another year or two this will be routine with even the smallest publishers.

At first some publishers dragged their feet a little on this project, but as a rule most of them were very cooperative even though it meant putting themselves to some expense. One small publisher has told us that we have pushed him into doing something he should have been doing for years.

What changes have we made in our schedule as a result of this information? So far not many, as we are feeling our way on this technique and as this is an "on and off" project the follow-up has not been as good as it should be. However, our personal opinion has been verified in many instances and changed in others, not so much by the figures as by the fact that this sort of study forces one into other studies.

To be specific, what if you find that of two magazines one covers your market 99% but the other only 75%, do you automatically go for the 99% coverage? No, you are forced now to examine them **qualitatively.** So the biggest lesson we have learned from this project is that **one** criterion is not enough. To do a thorough job will require at least three complete studies:

1. Circulation
2. Editorial
3. Readership

This is really a job for a research team. We are only pecking around on the edges.

'SIC Is the Cornerstone of Our Marketing Research'

SIC as applied by Vickers Inc. (division of Sperry Rand Corp.), makers of hydraulic equipment and control mechanisms

As far as Vickers Inc. is concerned the SIC is one of the cornerstones of our marketing research effort. We have divisions selling to industrial markets (as contrasted to others selling to military markets) and the comments we make on SIC refer to these industrially oriented divisions. Every sales order processed by these divisions is coded on the basis of the SIC. This information is then put into our tabulating department and processed through our Univac computer.

Every month we receive a report from Univac giving us a complete breakdown for the U.S. based on SIC. A similar breakdown is obtained for each of the district offices throughout the U.S. We also obtain a quarterly summary as well as an annual summary of this same information. Thus we are able to know at the close of each month what percent of our total business is coming from which market. We are also able to make comparisons as to the market penetration this year compared to previous years.

This basic sales analysis information is valuable to us in many other marketing areas. For example, it is

(continued on page 136)

LOGAN TRUAX JOHNSTON

DYNAMARKETER

Armco Builds Men to Market

By LAWRENCE M. HUGHES
Senior Editor

"A company's profit-making ability can only be as great as the combined skill of all the men who manage it."

'New Steels' of Tomorrow

Logan T. Johnston feels no regret over the fact that he declined to follow in the footsteps of his Presbyterian missionary father. Selling steel has been challenging. If he could turn the calendar back 35 years, he would still have selected steel.

But though Armco Steel Corp. of Middletown, Ohio, has had a stimulating past, its president is concerned only with the future: "If you worry about today," he says, "you're lost."

Other steel makers may be busy bemoaning the fact that their industry now operates at only 53% of capacity. (Armco's rate is 63%.) Producers of rival materials, from aluminum to plastics and fiber glass, are now busy shouting that, for 1,001 purposes, that old standby steel no longer is needed.

But under Logan Johnston, Armco is planning and betting big:

• Investing $341 million in new and better facilities between 1960 and 1965.

• Doubling the size of the company's Research Center to insure that tomorrow – more than ever – "New steels are born at Armco."

• Stepping up "promotional selling" of specialized products – tailored to customers' needs, and supported by a record advertising program – to expand sales by 60% to $1.6 billion by 1965.

• Decentralizing operations into separate divisional "profit centers," and training 5,000 managers (from foremen up) to build the skills to meet tomorrow's needs and opportunities.

All of these will count. But at Armco, Johnston emphasizes, the morale and effectiveness, not only of the managers, but of the entire group of 40,000 "associates," will continue to count most.

At Armco this "function" is everyone's concern. And instead of being **industrial** or **labor** or even **personnel** relations, it is **personal** relations.

Founder George M. Verity (another minister's son) was called by his fellow steelmakers a "boy scout," or worse, for introducing such policies as an 8-hour work day and group insurance. And as early as 1904, employees were asked to elect, by secret ballot, an advisory committee to meet with the managers—both to air and weigh grievances and to keep employees informed of company policies, practices and objectives.

And apparently people-development has paid off: Though sixth among steel companies in ingot capacity, Armco now ranks fourth in dollar sales and third in net profits. Some 76,000 stockholders have reason to appreciate the employees' morale—and development.

Chief executives of 171 large companies, surveyed by Dun's Review & Modern Industry, recently named Armco as one of the nation's 20 "best managed" corporations. They ranked marketing planning, organization planning and research as management's major problems of this new decade. A big part of organization planning is management development.

In their annual report for 1959, Chairman Robert L. Gray and President Johnston included a section on "building management skills." They pointed out that "a company's profit-making ability can be only as great as the combined skill of all the men who manage it."

Armco pioneered formal training in 1904. For four decades it has recruited promising candidates from colleges. Predominantly, throughout the long years, promotions have been made from within.

But other factors than sales growth and expectations, Logan Johnston explains, accentuate the current need: In recent years Armco acquired two companies with more than 10,000 employees. The corporation now operates on a decentralized divisional management basis. And since 1956 retirement of top executives has been mandatory at age 65.

Now 61, Johnston himself has only four years in which to get some big plans realized.

► George Verity's little rolling mill operation on the Miami river will be 60 in February 1961. For the first three decades, Verity himself prevailed. For the last three, Verity's son-in-law Charles R. Hook (still honorary board chairman, at 80) held a firm hand on the helm.

Now, room at the top—and below—is starting to appear.

"Down through our first 120 people," Johnston says, "we know where we stand. And back of each man we have three men qualified to do his job." To my question on "special comers," Johnston pulled out a lower lefthand drawer: "I spot them in each age bracket – in their 30's, 40's and 50's. I keep track of comers abroad, too."

(Today, Armco's six divisions operate a total of nearly 100 steel plants, mines, quarries and manufacturing plants in the U. S. and around the world, from Australia to Colombia and the Congo, as well as 400 sales offices, warehouses and stores.)

But on middle and lower levels, management needs are pressing.

Every Armco trainee takes a 3-week course to "get the feel" of the company. After that, one-fourth of all employees sign up annually for a lot of voluntary courses offered by the company.

Each year, Johnston adds, "we evaluate formally the work and capabilities of each of our 5,000 managers. These appraisals also help to indicate each individual's needs. Then a development plan is worked out by him and his supervisor.

"With every manager's qualifications on tab at headquarters, the corporate staff group can suggest candidates for any management post that opens anywhere in the company. The file also enables us to forecast management needs and make long-range plans to fill them."

The forecasts recently showed that Armco must have

DYNAMARKETER

many more qualified managers – fast. In the first five years of the retirement-at-65 policy, half of the 80 top executives must be replaced. Each replacement involves as many as 20 promotions down the line.

And so, this year, the company has started to school all 5,000 managers, here and abroad, in such skills as planning, organizing, motivating and controlling – all of which add up to "the Profession of Management"—and on how Armco thinks they should be applied.

Thus, continuously, under Logan Johnston, Armco spawns the managers to make and market the materials of tomorrow. With their development, Armco is investing big money to make a lot more money for its owners.

Johnston made news not long ago by announcing the "release" of $95 million for capital expenditures. Actually, with $101 million already under way, this brings to $196 million the size of Armco's current program. Thus the current bet (of a company whose entire assets, as of last December 31, stood at just a shade above $1 billion) comes to more than half of the $341 million planned for the five years 1960-65.

The whole investment is not so much in larger as in better facilities. Every dollar paid out now must bring back dollars in lower costs and greater profits.

At the same time, the company is stepping up product creativity.

In 1910 Armco established the first separate research laboratory in the steel industry. A few years before, when big U. S. Steel was being put together to "own" a commodity called steel, George Verity managed to get going and then growing by concentrating on, and creating, higher-cost and higher-profit "specialties."

The fact that a lot of these specialties have since become commodities does not worry Logan Johnston. Armco has licensed freely—and profitably. Under "revenues" for the year 1959, Johnston could report "dividends, royalties, interest, etc.," at a record $21.5 million. He does not say how much of this came from royalties.

For a half-century Armco created and contributed at a rate of one major new product or process an-

"The F.T.C. says discount demands are illegal, so I'll ask you nicely . . ."

Editorial interest that's unbeatable!

Successful Farming has it—*self interest!*

No subscriber gets this magazine for entertainment, diversion, gossip or trivia—but because it contains information on methods, materials, machines. Information he must have and heed, to increase his production and income, to avoid mistakes, to cut losses, to plan better, to utilize best his farm plant, to hold his own in the agricultural revolution and the vicious squeeze between the prices he pays and the prices he gets.

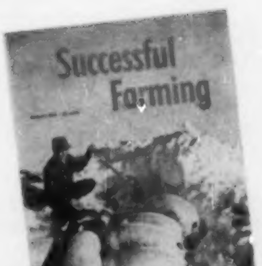
He not only reads Successful Farming, but studies it, files it, refers to it again and again. Every issue means *opportunity*, and money in the bank.

The farmer's wife also gets help from Successful Farming. Her home is at the factory. No publication for urban women is concerned with her kind of housekeeping—for larger families, who eat larger meals and more at home than urban families. She entertains more at home. She battles mud and snow. Soiled work clothes make up much of her laundry. There is no shopping center nearby, so she must plan ahead for her buying, with larger orders and inventories. She can and does use the recipes, kitchen plans, work savers, suggestions for furnishing, decorating, serving, entertaining—all scaled to farm living.

In fifty-eight years of helping the country's best farm families earn more and live better, Successful Farming has earned an influence unmatched by any other medium. Influence manifest in the magazine's longer life, higher readership and recall of advertising – and higher response! If you want your advertising to sell something, put it in Successful Farming!

SF farm families are well off, with average incomes about 70% above the national farm average; rank high in car and truck ownership; have built more than 65,000 new homes in the past three years!

For details, see any SF office.



Successful Farming . . . Des Moines, New York, Chicago, Atlanta, Boston, Cleveland, Detroit, Los Angeles, Minneapolis, Philadelphia, St. Louis, San Francisco.

nually. Though the rolling mill may stand at the top, its list includes: steels that "take" electricity more efficiently; metallic coatings, such as aluminum on steel, to resist corrosion; stainless steels, and a process to convert low-grade taconite ore into high-grade pellets.

"Today," says Logan Johnston, "our research and development work, our sales organization and effectiveness and our advertising expenditures—all are at peak."

The $3.5 million which Armco is investing in new research facilities is intended "not only to develop new products but to improve processes. . . . In markets, we are going into prefabricated buildings for industry and farms. We are working on ways to put more steel into apartment and office buildings. . . . We got out of prefabricated steel homes — but we may go back into them.

"We don't sell steel. We sell values."

Armco's president talks a lot about "promotional selling." This is a process of turning one-time into permanent customers. "We're concerned, more than ever, with **small,** as well as large, manufacturers and contractors. The small customer of today can become the large one tomorrow. . . . To earn his faith, we might even **dissuade** him from buying!"

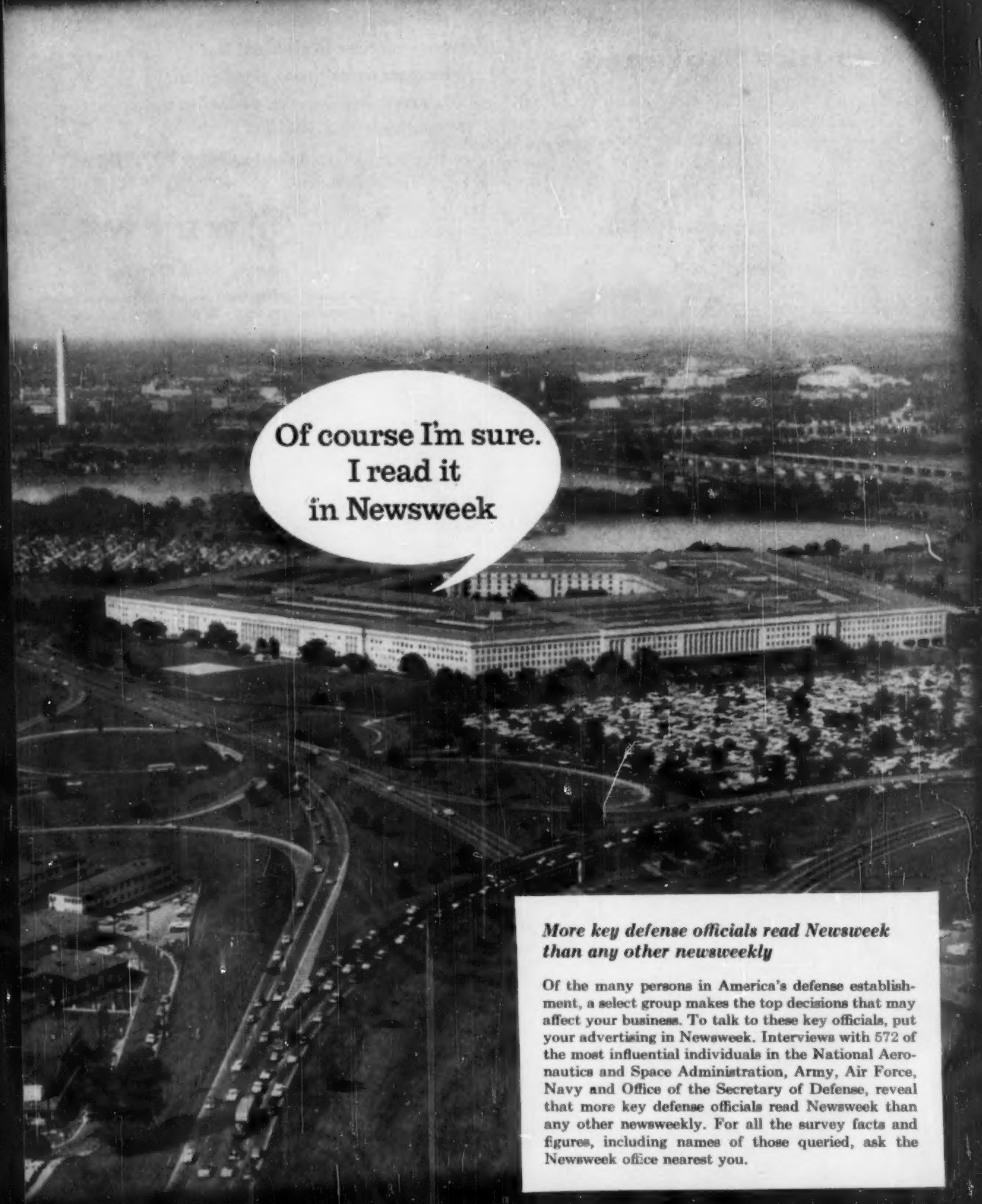
► Johnston does not reveal advertising budgets. But the trend is emphasized by the fact that, despite the 6-month steel strike, Associated Business Publications reports, Armco's expenditures in business publications in 1959 more than doubled—from $476,000 to $1.1 million.

Since its first insertion in The Saturday Evening Post in 1914, this company has advertised quite consistently in mass media. But despite the fact that of late "we've increased corporate more than product advertising," as Johnston says, efforts still are directed toward specific problems of specific prospects.

Logan Johnston's first job after graduating from Carnegie Tech was selling cranes and hoists for Yale & Towne on Minnesota's iron ranges. But that was too far from a girl named Janet Rutherford in Pittsburgh. He returned to Pittsburgh, got a full-time job in steel and married her.

Logan Johnston still spends half his time traveling. "A good executive," he says, "is always selling." He expects steel to grow at least as fast as the economy — and Armco to grow faster still.

Most of all, he seeks to build the men to meet the opportunities of tomorrow. ◆


Of course I'm sure. I read it in Newsweek
More key defense officials read Newsweek than any other newsweekly
Of the many persons in America's defense establishment, a select group makes the top decisions that may affect your business. To talk to these key officials, put your advertising in Newsweek. Interviews with 572 of the most influential individuals in the National Aeronautics and Space Administration, Army, Air Force, Navy and Office of the Secretary of Defense, reveal that more key defense officials read Newsweek than any other newsweekly. For all the survey facts and figures, including names of those queried, ask the Newsweek office nearest you.
The world-wide newsweekly for communicative people

A pretty melody is like Florence

Florenz Ziegfeld to Florence, South Carolina—glorifier to glorified! But Florence doesn't need glorification. Fifth largest single-station market in the nation, Florence and WBTW go together like words and music.

WBTW

Florence, South Carolina

Channel 8 • Maximum power • Maximum value
Represented nationally by CBS Tv Spot Sales

A Jefferson Standard station
affiliated with
WBT and WBTV, Charlotte

MARKETING NEWSLETTER

—SM—

ADVERTISING

oil marketers question radical new approach

Oil marketers can't stop talking about the radical new advertising approach about to be taken by Shell Oil. Some competitors smirk; others fret. One thing is sure—they'll all keep a wary eye on Shell for many months to come.

Shell's product advertising in '61 will represent a sharp break with tradition not only in its solo medium approach but in ad theme and copy as well. Shell's marketing v-p, J. G. Jordan, is convinced that "few oil companies have ever attempted to tell the consumer the real facts about gasoline and oil. We believe that consumers are interested in facts, if presented in a way that they will understand, respect, find credible."

The company's planned departure "from the single-gimmick approach" will call for "newsworthy copy" that makes newspapers "the logical medium" to use. While virtually the entire product budget (around $15 million) will be pumped into newspapers, the company will continue to invest its institutional ad dollars in national magazines and network TV. . . . Competitors are curious about Shell's new ad theme—and anxious to see if Shell will actually resign its $3-million-plus outdoor franchise. Most oil companies hiked their outdoor budgets in '60, are still convinced it's a medium they can't do without.

SELLING

institutional ads that really sell

Note this classic case of an institutional ad campaign that really pre-sells industrial products. International Paper's much-talked-about ad series—"Send Me a Man Who Reads"—achieved these impressive results as a door opener for salesmen: 85% of the salesmen said their customers or prospects commented on the campaign (in Fortune and Reader's Digest); 96% considered the ads helpful; and 71% received inquiries or orders because of them. . . . International, a billion-dollar company, has serviced requests for nearly half a million reprints of the ads, is planning to carry the story of "the man who reads" a step further in '61, and is still smiling broadly over the results of its first fling at a national ad program.

STRATEGY

shifting markets vs. product strategy

Will other medium-price cars get the ax? Or will most auto makers shrink their middle-range entries into compacts, while keeping the names the same? Market shifts in the auto field are forcing more car makers to make this big decision. . . . Chrysler chose to kill the DeSoto; to make the compact Dodge Dart carry the ball for its faltering middle-price Dodge. Ford suffered through the Edsel fiasco, is now shrinking the price and size of its Mercury. And General Motors offers both regular and compact models in all three of its one-time medium-price lines: Buick, Oldsmobile, Pontiac. . . . With compacts now lapping up a third of the market, there could well be more victims of the medium-price squeeze.

TRAVEL

plush airline clubs may be shut down

Exec air travel may become a bit less luxurious. Civil Aeronautics Board suspects that airline clubs operated by several carriers, featuring plush lounges at major airports, are illegal because members get favored treatment. The law states: "No air carrier shall make, give or cause any undue preference or advantage to any particular person." CAB reports receiving complaints from non-members denied access to such private retreats. . . . One club-minded airline alone lists 76,000 members. Many are sales execs or other corporate officials, along with Government bigwigs. (Incidentally, at least one CAB member is on the rolls of one club.)

A decision is expected before January as to whether possible illegal aspects of the clubs warrant a full-scale investigation by CAB. Particularly suspect is favoritism to club members in getting last-minute tickets. Unfavorable findings could result in closing of clubs now run by American, Trans World, Pan American and United Air Lines.

FAIR TRADE

retailers can sue price-cutters too

Manufacturers can now get help in enforcing "fair trade" contracts from those retailers hit by price-cutting competitors. The U.S. Supreme Court has opened the door to enforcement suits by merchants in all fair trade states by refusing to review a precedent-making decision of the Maryland Court of Appeals. Heretofore, only manufacturers could sue to maintain resale prices; often they have been reluctant to do so.

In the test case, a neighborhood drugstore in Maryland sued two competing chains (Dart and Peoples) for selling products of four major drug firms at prices below fair trade minimums. The chains won the first round when a circuit judge denied an injunction on grounds the manufacturers had been lax in enforcing contract minimums, and that a competing druggist could not resort to the courts to police an admitted contract violation involving manufacturers and other retailers. . . . The appellate court reversed that ruling, describing the chains as "two of the most active price-cutters in the area," and finding that the manufacturers had been reasonably diligent in their efforts to maintain contract prices.

MISCELLANY

diet drinks—retail sales—magazines go abroad—

Another major company enters the diet-drink race: National Dairy Products with its Sealtest 900 Calorie Diet, a liquid food product that's ready to pour and drink. Similar to Borden's Ready Diet 900, the Sealtest product will be sold in food stores and through Sealtest milkmen. . . . Census Bureau is considering a proposal to conduct a 1960 retail trade survey of year-end inventories, annual sales, and number of retail stores operated at year-end. . . . Some 1,300 retail stores sell more than $5 million a year each. Another 7,000 are in the $2 million to $5 million bracket. . . . U.S. consumer and business publications have a total circulation overseas of more than 14.2 million copies an issue, for which their readers pay $50 million to $60 million a year, says Magazine Publishers Assn.

"300 inquiries...
27 different industries...
96% from top level executives"

300  27  96

BERMAN SERVICE

BERMAN SERVICE INC.

June 24, 1960

Mr. A. Geoghegan
The Wall Street Journal
1528 Walnut Street
Philadelphia 2, Pennsylvania

Dear Al:

As you know, we assigned The Wall Street Journal the mission of carrying the Berman Service leasing story to the decision makers in business and industry in our areas of operation. I'm sure you will be delighted to know that The Journal has been hitting the target, but good!

From over three hundred inquiries requesting our "Lease With Confidence" brochure, ninety-six percent have been from top level executives. A recent analysis of all inquiries received to date also revealed that twenty-seven different industries had representation.

In addition, our sales representatives have experienced an increase in Berman Service recognition when calling on prospective clients. This recognition has also been a factor in increasing the number of invitations to bid from the areas covered by the Eastern and Midwestern editions of The Journal.

From the above results, we feel our selection of The Wall Street Journal has been a very wise investment and will certainly continue to be a part of Berman's current expansion program.

Sincerely,

Philip L. Bonner
Philip L. Bonner
Advertising Manager

THE WALL STREET JOURNAL

Published at: New York, Washington, D.C. and Chicopee Falls, Mass. • Chicago and Cleveland • Dallas • San Francisco

Sales M[illegible]ment's Advertis[illegible]athervane

An-industry-by-industry look at potential inventories and an estimate of the advertising pressure that may be necessary to move these inventories.

Key to Ratings of "Advertising Pressure"

(The Advertising Increases Needed to Capitalize Fully on Current Potentials for Sales)

★ Even maintenance of advertising required.

★★ Normal advertising advance required (5% to 8% increase in budget).

★★★ Large advertising increase required (8% to 14% increase in budget).

★★★★ Extraordinary advertising increase required (more than 14%).

Key to Ratings of Inventory Size

A—$2 billion and over
B—$1 billion to $2 billion
C—$750 million to $1 billion
D—$500 million to $750 million
E—$250 million to $500 million
F—$100 million to $250 million
G—Under $100 million

Size is by value of the industry's inventory as of the present time.

↑↓ Arrows indicate increase or decrease in rating over past two months.

Industry	Next 2 Mos.	Next 12 Mos.	Industry	Next 2 Mos.	Next 12 Mos.	Industry	Next 2 Mos.	Next 12 Mos.
[illegible]	★★★	↑★★★★	[illegible]	★★	★★	[illegible]	★★★★	★★★★
[illegible]	★★★	↑★★★	[illegible]	★★★	★★★	[illegible]	★★★★↑	↑★★★★
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Recession Talk Won't Stymie Ad Growth

Both a production step-up and a substantial increase in advertising expenditures can be expected in 1961, according to SM's Advertising Weathervane Board. Despite the continued relatively high inventories generally held in production and distribution channels, businessmen are expected to expand production an average of about 2.7% in 1961 over '60.

Similarly, an average gain of 5.2% is indicated in total U.S. advertising expenditures for the next 12 months. This would advance the 1961 aggregate advertising level to a new high of around $12.4 billion, compared with $11.8 billion estimated for '60 and $11.1 billion for '59. Such spending totaled $9.2 billion in '55, $5.7 billion in '50 and only $3.4 billion in the first post-war year 1946.

The recession talk of some pessimists is not expected to have a material over-all effect on the vigorous growth trend of advertising expenditures. In fact, there is a widespread and growing reassurance that the nation's resourceful and imaginative advertising activity has been a top essential development characteristic of our thriving economic system.

The scope of the 1961 job indicated for advertising promotion is evident in the fact that the Weathervane Board expects practically no letup in the pace of spending for new plants and equipment to expand ca-

	Next 2 Mos.	Next 12 Mos.		Next 2 Mos.	Next 12 Mos.		Next 2 Mos.	Next 12 Mos.
[illegible]	★★★★↑	↑★★★★	MACHINE TOOLS	★★★↑	★★★	[illegible]	★★↓	★★
[illegible]	★★★	★★★	MACHINERY, INDUSTRIAL	★★★★	↑★★★★	[illegible]	★★★	★★★
[illegible]	★★★★	↑★★★★	[illegible]	★★	★★★	[illegible]	★★★	↑★★★★
[illegible]	★★★↑	↑★★★★	[illegible]	★★★	↑★★★	[illegible]	★★★★↑	★★★
[illegible]	★★★	★★★★	[illegible]	★★★	★★	[illegible]	★★★↑	★★
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pacity—and such expanded facilities will come on top of an already huge national production machine and high current inventories of manufacturers and distributors, estimated at $93.5 billion—$4 billion above the figure of a year ago.

Despite the extensive spread of gloom through 1960, businessmen by and large remained convinced of the necessity of expanding and modernizing their plants and equipment, and the year is winding up as one of the biggest expansion years in history. This, of course, increases the nation's output potential and places further pressure on its distributional machine. This machine, which today is more influential than production in maintaining a prosperous national economy, is expected to achieve a still wider market for peacetime products in 1961. And it is expected to intensify such achievement in the years ahead, regardless of whether or not industry enlarges its flow of armaments.

The incoming-Administration, with its "move-ahead" philosophy, will probably push for greater production. Increased employment and growth are simply concomitant with a larger flow of goods, but these goods won't move adequately and the nation will not "move ahead" unless essential advertising and selling activity does even more than the traditionally fine efforts of the past have done.

The magnitude of potential output already is staggering. All manufacturing in this country recently operated at only 80% of capacity, and, with all the efficiencies of newer machinery and increased labor productivity, output has been large enough to give us an inventory $4 billion higher than it was a year ago. Now, this big, fertile, producing giant has grown to the extent of about $36 billion more of new plant and equipment for the year 1960.

For next year, despite supposed discouragement of some businessmen, the board finds very little decline indicated for expansion plans; it looks as if about $35 billion **more** will be tacked on to present factory facilities, and, accordingly, a substantial amount more of goods for advertisers to distribute. A small, but increasing, amount of such spending for new plant and equipment will be made abroad, but, even so, many goods produced overseas by American interests will find their way back here to be distributed.

In essence, then, the fire of excitement that burned brightly at the beginning of '60 over the roaring decade ahead is still alive. Businessmen remain convinced that a greatly expanded plant is going to be necessary to handle the vast needs which will arise from marriages of the huge generation of World-War-II children now approaching adulthood.

The steady pull of long-range dynamic influences is expected to make itself felt increasingly. Particularly influential are the nation's heavy research and development expenditures, since they result in improved, more attractive older products, as well as new products. Last year's U.S. expenditures for research and development totaled $11.8 billion (more than 11 times the '41 total) and such expenditures boomed up to more than $13 billion in the "slowdown" year 1960. For next year, the board foresees a further increase to approximately $14.3 billion.

Many companies' products today are radically different from their

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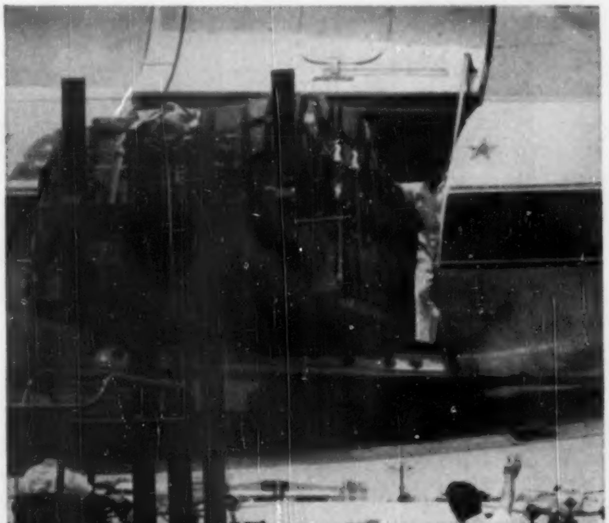


products of only a decade ago. More advertising is needed constantly to educate the consumer on these advances and stimulate him to buy.

Advertisers planning their '61 campaigns should find encouragement in the board's belief that in the new year disposable personal income may be about 4% higher than in '60. While expected to start slowly, with slowdown and recession talk still prevailing, the year is expected to progress upward and burgeon into new high activity in the later months.

Not only will consumers be in a good position to buy, with current incomes high and savings reserves high, but businessmen also will have large buying power. True, profits are being squeezed, principally by rising labor costs, but a relatively good profit showing on the full year 1961 is still anticipated. Meanwhile, the very strong financial condition of American business (with liquid assets at a new high) will maintain corporate buying power at a favorable level. Net working capital of corporations, representing current assets minus current liabilities, now is estimated at more than $135 billion, compared with $129 billion at the beginning of 1960.

▶ SM's Advertising Weathervane reflects the influences of all the preceding factors, as well as a wide variety of others bearing on advertising pressure ratings for each of the industries tabulated here. The ratings, which can readily be translated by referring to the key at the top of the page, are based on a comprehensive range of data available to a carefully selected panel of 80 authorities. Wholly impartial, this Advertising Weathervane Board includes trade analysts in the Department of Commerce, Census Bureau, Department of Labor, Federal Reserve Board and other Government agencies, as well as in trade associations, financial institutions, universities and other private organizations. The ratings are developed from the consensus of these experts, who evaluate and draw conclusions based on the following weights for Advertising Weathervane ratings, using a universe of 100:

Current Production Capacity and Import Potentials	20%
Expansion Projections and New Products	25
Current Inventories and Sales	20
Public Needs for Products and Potential Buying Power	20
Ability of Industry to Finance Increased Advertising	10
Industry Labor Productivity	5

◆

This is one key club you don't want to join

MEDISIT *(Man, Every Display I Ship Is Trouble)*

If you *already* have, however, it's time to retire your membership! Put an end to late display arrivals, damage in transit, design limitations, and time-wasting tie-ups of your key personnel . . . use North American Van Lines' comprehensive display shipping service.

Your display is a highly specialized sales tool . . . it's not freight! It deserves, really demands, North American's specialized, personal handling. Your display arrives on time, gets in faster . . . no uncrating, no complicated assembly, no crate waiting at show's end. You put on your hat, North American does the rest. It saves dollars, time and worry.

To find out more about the advantages of this display shipping service, ask your traffic manager or write our world headquarters in Fort Wayne.

NORTH AMERICAN VAN LINES

WORLD WIDE MOVERS

Dept. 24-5, Fort Wayne, Indiana

How to Apply and Use SIC Data

Much of the pioneering in industry that has led to the ever increasing application of the Standard Industrial Classification codes has been accomplished by business publications.

It is in recognition of their dedicated work that we have asked six publishing houses, whose publications range across industry, to describe the benefits of the SIC system and to point out fresh areas for development.

Their interpretations will help you if (1) you are a manufacturer who wants to "get his feet wet" in this system of identifying markets, (2) you are well started in using SIC but wish to enlarge your knowledge, and (3) you are a sophisticated user of SIC and seek the ideas of other sophisticated users.

'More Sales at a Lower Cost per Sale'

By JOHN H. KOFRON,
Director of Research
Chilton Co.

Here is an example of a company with four marketing objectives and how SIC data aided in their attainment. The objectives were:

1. To establish product requirements
2. To determine market potential by industry and area
3. To lay out sales territories
4. To obtain sales leads

As a first step, marketing officials analyzed previous sales records, and consulted with district sales managers. Then Iron Age's Basic Metalworking Data was consulted to determine the number of plants in each industrial area, and in the country, that could be considered potential customers. Out of this a list of over 100 4-digit SIC groups of potential customers was drawn up.

A survey was then conducted to

Sound Off . . .

Much of **Sales Management's** editorial planning is ignited by subscribers themselves, through their letters-to-the-editors. We welcome not only your reaction to **SM** articles, but invite you to tell us what subjects you'd like to see us tackle.

determine the number of concerns in each industry that could qualify as potential customers, and the approximate dollar volume each concern might be expected to account for. Survey replies were arranged by geographic area and by SIC. Specific information learned through the survey included data on size of plant, principal products, number and size of machines used, whether these machines were hand operated or automatic, the type of material being worked, and the names and titles of purchase decision executives.

Using SIC with data collected through the survey, the company then proceeded to compute potentials by area. Here is an example of how they did it for the Chicago area: In SIC group 3543 – Cutting Tools, Gauges, Dies, Accessories—there are 80 plants in the Chicago area. The survey indicated that 38%, or 30 of these plants, were in the market for the company's product. This figure then became the potential market for this company for SIC group 3543 in the Chicago area. Similar calculations were then made for all SIC groups to obtain the total potential for the Chicago industrial area, and by a similar process the potential for the country as a whole was computed.

With these results, and the knowledge of industrial and national potentials, the company was able to realign its sales effort. In some cases the sales staff was increased or distributors were replaced by company salesmen. In others, salesmen were replaced by distributors. Because the district office salesmen had more detailed information at their disposal, the net result was fewer wasted calls and more sales at a lower cost per sale.

If the SIC system had not been available, the above marketing program would have been next to impossible. To review briefly, SIC was used:

1. To code present customer list
2. To classify the returns
3. To analyze the responding plants
4. To locate comparable plants
5. To project the sample for areas and a national basis

A second Chilton publication, Electronic Industries, felt it necessary to establish its own system of classifying manufacturers in the market it serves. In spite of revisions in the code since its inception, SIC was held to be inadequate to classify establishments in this industry. Electronic Industries developed an EIC (Electronic Industry Classification) code to account for the many classes of electronic components not included in the Government SIC. The need for this classification should be clear when it is realized that the entire electronic industry is contained within 12 SIC groups, and that many major classes of assembled electronic equipment are grouped indiscriminately with non-electronic products or with other industries. The fact that manufacturing concerns are classified only by their major product produced was another condition that helped bring about Electronic Industries' own code system.

The EIC system thus provides a detailed breakdown of specific product classifications—3,300 classifications versus 12 SIC groups. Plants, moreover, are classified according to all products produced.

EIC can be a valuable marketing tool when used properly. By itself, like SIC, it is merely a means of classification. Used with other data, it can be a tool for planning and directing marketing effort. A manufacturer of semiconductors, for example, was able to determine product requirements for one of the items in his line by isolating the plants within the electronic industry that were using zener diodes. The EIC was also used to set up a list of future sales prospects. By surveying prospective customers, the company was able to pinpoint and measure its potential market as well as the product specifications needed to satisfy that market.

'How SIC Can Be Applied to Advertising Problems'

By S. F. MARINO,
Business Manager,
Steel

Three of the most important uses of SIC in industrial advertising are: (1) allocating advertising budgets by industries, (2) determining industries which should receive special marketing effort because of the high concentration of sales opportunity, and (3) selecting businesspapers for advertising schedules.

1. Allocating advertising budgets by industries.

For help in deciding how advertising budgets should be allocated, the industrial marketer should be furnished with sales analysis reports which disclose the present sales pattern in terms of the dollar volume sold to various SIC markets. Steel's new Marketing Work File contains special Market Analysis Forms designed for this purpose. The forms also provide a method of determining the potential market by SIC, independently of internal information. By

New facts about advertising values in the rubber market

Now–Rubber World offers...

...greater coverage–over 85% direct (a) verified circulation, more than the <u>total</u> circulation of the second publication

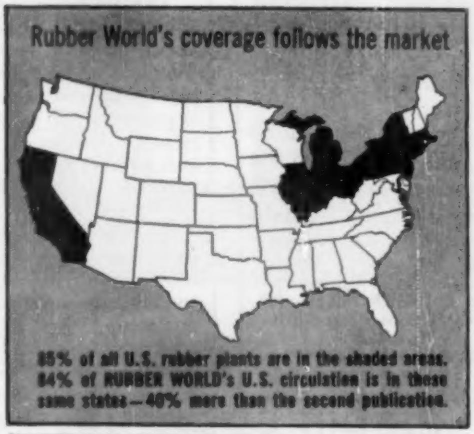
...lower cost per thousand

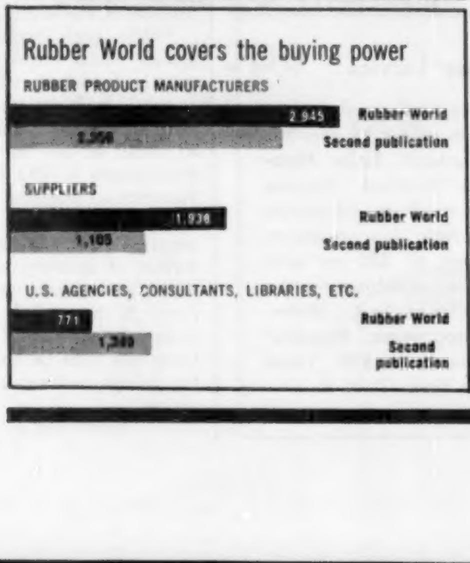
...editorial authority

In the rubber market today, there are twice as many companies, operating twice as many plants, making twice as many products with twice as much sales value as there were just ten years ago.

RUBBER WORLD keeps pace with the growing rubber market.

Today RUBBER WORLD's total circulation of 5,655 contrasts with the 4,799 of the second publication. And now, over 85%–4,821 of RUBBER WORLD's circulation is verified under "(a) direct communication to the publisher."





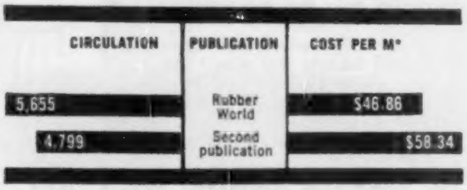
Editorial Quality

RUBBER WORLD's editor and executive editor are graduate chemical engineers and boast years of practical experience in the industry through actual work with rubber companies and research organizations.

In addition–ten of the rubber industry's leading technologists act as an editorial advisory board to help RUBBER WORLD maintain its editorial excellence.

Lower cost per thousand

Your sales messages not only reach more of the real buying power in the rubber industry in an editorial atmosphere that gains them sympathetic readership–but at a lower cost per thousand than the second publication in the field.



**Based on 12 time b&w full page rates*

Evidence of value

That these values pay off is evidenced by the fact that many of the leading companies in the industry have been long-time, consistent advertisers in RUBBER WORLD; two – Farrel-Birmingham and John Royle & Sons – *since 1890*. In all, fifteen of these companies have been advertisers for 24 years or more, fourteen of these 32 years or more, nine over 40 years.

For greater coverage–lower cost per thousand –editorial authority–

RUBBER WORLD

A Bill Brothers Publication

630 Third Avenue, New York 17, New York

-SM-

AT YOUR SERVICE

A classified list of professional firms which serve sales and marketing executives

Sales & Exec. Training

Public Relations

Research Agencies

Other Services

comparing the results of these two analyses, the people charged with the responsibility of allocating budgets can determine how the budget should be divided among industry markets. The actual split up of the budget depends on the company objectives set after a preliminary investigation.

The industry approach to the allocation of the advertising budget would seem the most applicable because the basic method used to reach the market – the businesspaper press – is also organized, for the most part, on an industry basis. It is also quite common to have direct mail campaigns planned and carried out on an industry basis. A geographic allocation might be desirable, too. Steel's Continuing Census of Metalworking Plants counts the number of metalworking plants employing 20 or more in each state, and defines them by SIC group and by employment size. By combining this information with your company's internal sales records, you can weigh your actual sales performance in an area against the potential in the area. Those areas in which the share of market is unduly small can be allocated an arbitrary amount of the budget with the objective of increasing the share of market.

This entire operation depends on the employment of SIC. First, the customer list must be coded by SIC for sales analysis purposes, and then the market determination, carried out independently of internal information, must be done on an SIC basis so that it is possible to make meaningful comparisons.

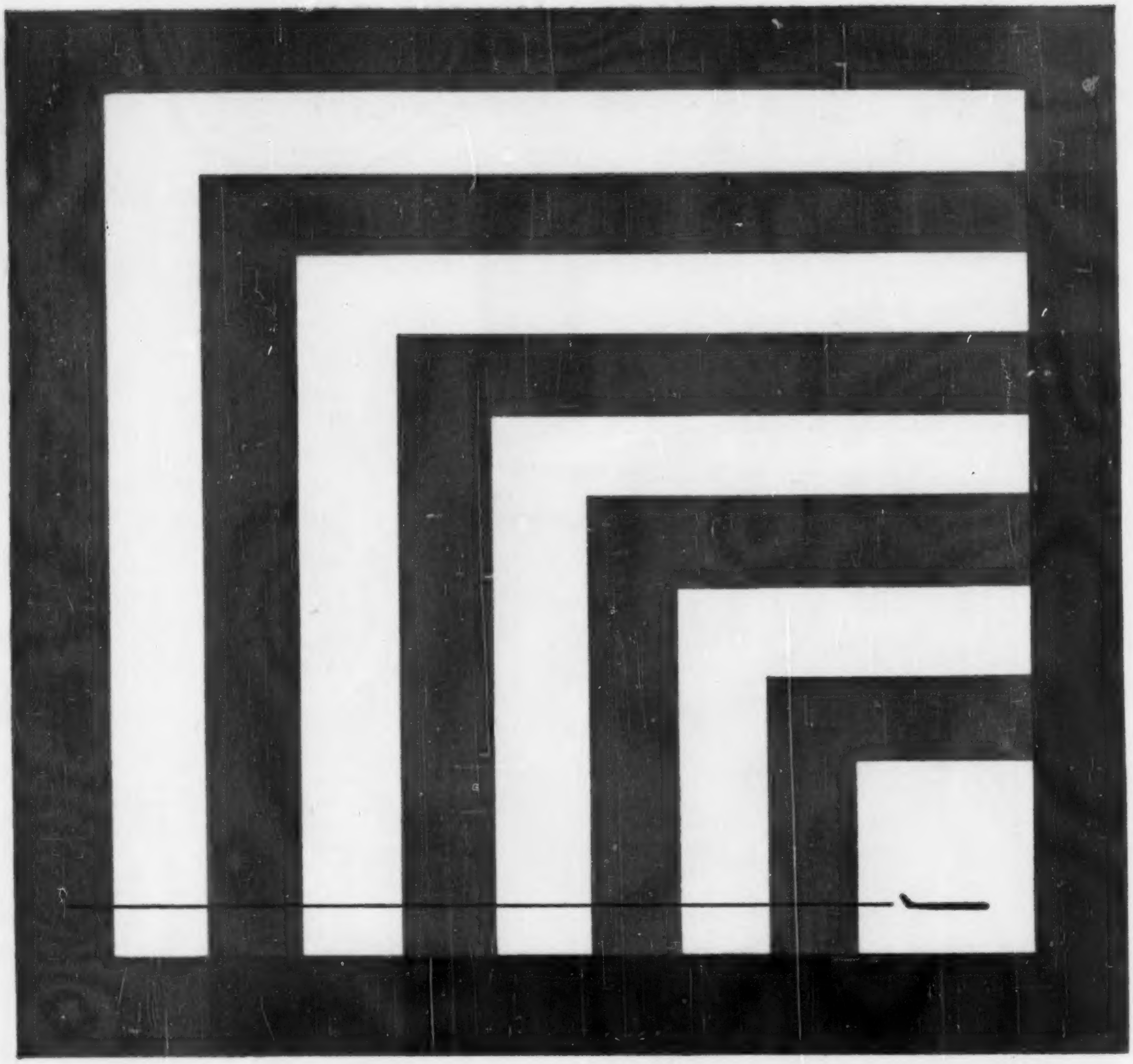
2. Determining industries to receive special marketing effort.

The industrial marketer should be continuously searching out those industries which show a high concentration of sales opportunity. These industries are the ones that will produce a much greater than average volume of sales when only an average amount of marketing effort is invested.

While such exploration could be done without employing SIC, its use greatly facilitates the entire process. It would be quite meaningful to know that 70% of all inquiries received as a result of an advertisement came from plants in SIC 3391 – the manufacturers of iron and steel forgings.

Another method is the use of a mail questionnaire. In this case, a cross section of industry is selected from a publishers' census and the questionnaire is pre-coded by 4-digit SIC classes before being mailed. The returns can then be analyzed by industry groups to form a basis for future action.

(continued on page 66)



3. Selecting businesspapers for advertising schedules.

To do an effective job of selling or helping to sell a product or service by means of advertising in businesspapers, an industrial marketer attempts to do the following:

(a) Determine the types of plants that are now customers or are prospective customers for the product or service. These should be classified and identified according to SIC.

(b) Determine the relative purchasing importance of these plants.

(c) Discover who the men are, by title, who influence the purchase of the product or service by these plants.

(d) Buy appropriate space in those businesspapers which are being read by these buying influences so that the advertising to be run will have the best audience possible for the money invested.

(e) Create an ad which will cause these buying influences to follow a course of action or thinking which is desired by the advertiser.

No one really buys circulation. Space buyers purchase readership. Therefore, it is important that in addition to the quantitative aspects of circulation on an SIC basis, the qualitative side—readership—be considered.

Although plants are the buying units in the manufacturing market, it should be remembered that people are the buying influences. Industrial buying is typified by multiple buying influences. Therefore, sole reliance should not be placed on the number of buying units or plants covered by circulation. An evaluation should also be made of the number of copies of a publication going into each SIC industry. In like manner, it is important to take a look at the average number of copies going into each plant in each of the SIC classes.

'The Ideal Application . . . Establishes a Sales Index'

By ARTHUR H. DIX

Vice President in charge of Research Conover-Mast Publications

The ideal application of SIC employment figures is in a case where it is possible to establish a sales index for a given product. Usually this works best in the case of expendable products—those that are consumed—as for example, cutting tools, abrasives, lubricating oils, mechanical rubber goods, and even the lighter forms of capital goods, such as portable tools, etc.

This is the formula: You find out how much annual purchases are in an SIC group, per thousand employees, and then with the aid of SIC employment figures, you can work out a sales potential for any metropolitan area, state, region, or any other division.

Mill & Factory issues an "Industrial Marketing Map" showing the 294 major industrial counties (those having 10,000 or more manufacturing employment) representing about 80% of the national industrial market, using employment as a yardstick.

The same data can be used in determining how much of the market per capital goods is in each area. But of course, in the case of capital goods, one year may be high and another may be low, depending on business. In the case of consumable items, the market is much steadier from year to year.

It will pay the manufacturer to be able to say to a distributor (or a manufacturer's representative, or a direct salesman), "Now, there's $750,000 worth of our kind of product bought annually in your territory. We know, because we measured it. Your fair share is $410,000."

Not many manufacturers do that. Why not? Isn't it human nature to

$6,260

TIME

do better if a target is set up—if we know what's par for the course? Many manufacturers say the reason they don't establish sales goals is because they think distributors (or manufacturers' representatives, or direct salesmen) don't like quotas.

What's the reason? Inertia is only a partial answer. Mixed in is doubtless a feeling that selling is too complex to yield to arithmetic—a distrust of figures—a feeling that calculating about how much business each territory should yield is tempting fate.

Perhaps something else is involved, a fear that market measurement will reveal the need for making some changes—changes that are often unpleasant to make. Maybe the current high brass themselves were beating the bushes for business twenty years ago, and nostalgically they like to think of the market today as it was then.

Maybe the big boss himself appointed a distributor in a southern California territory some years ago—or gave a direct salesman the east Texas territory. And maybe each still has his original territory, despite the fact that east Texas is about five times as important industrially today as it was in pre-war days, and southern California is about eight times as big a market today as it was then.

Cutting territories is painful. Sales people don't like being uprooted and replanted a thousand miles or so away. Decisions like these are uncomfortable to make, but ultimately they are hardly as distressing as seeing a less sensitive competitor capture a searing market simply because he had someone on the scene to rake in the orders.

The fear that territorial market measurement will reveal the need for changes in the sales set-up is well grounded. Revolutionary changes have taken place in the distribution of the industrial market. Using employment as a yardstick, and it's a fairly good one, today Florida is more important industrially than Rhode Island. More people work in Texas factories than in Connecticut's. Before World War I New England was about twice as important industrially as the Pacific Coast. But today more of your sales, and more of your sales machinery, should be on the Coast than in New England—if you sell the broad industrial market.

'Accent on Scientific Marketing'

By TED RICKARD
Director, Market Development
Haywood Publishing Co.

We have determined the consumption of corrugated packaging by using industry, by geographic region, and by SIC group. We soon will do the same on all other packaging materials.

Now we are working on pinpointing those using establishments by 4-digit SIC, by location.

When the study is completed for each type of packaging used by U.S. industry, we will not only have thoroughly and demonstrably market-oriented circulation control, but we will have established a detailed measurement of packaging's end-use markets in a form capable of being kept up to date.

In the early 1950's we found that the SIC system presented a ready-made means by which we could classify large amounts of information in usable form. In our case, the SIC applied to data on packaging from the Census of Manufacturers enabled us to guide our controlled circulation.

As the 1950's went on, however, we found ourselves operating more and more in a business climate of ever-intensifying accent on scientific marketing. This accent seems to be "peaking" now and lies behind our current corporate program to orient our entire operation to sound market data analysis. Thus the SIC codes become more than handy tools—they literally have become the language by which market data is made comprehensible and workable.

▶ When we first started using SIC to classify the circulation of our publications, we installed IBM data processing equipment.

What started as a simple, though substantial, gain in operating efficiency has now become an integral part of our publishing operation. It is no longer enough for us to get and hold responsible buying readership in our magazines. We have to prove exactly the extent to which we are covering the present and potential market for the advertiser's product. To do this correctly, we have to know the market thoroughly—both the market for the particular advertiser's product and the total U.S. industrial market, inasmuch as the field of our two packaging publications—Consumer Packaging and Industrial Packaging—affects all U.S. industry.

When our program is complete we will have in processable form specific information on each major U.S. industrial establishment, detailing the product produced (and packaged), size of the establishment, type of packaging used, and an indication (via a weighted index system) of the relative importance of that establishment in the total market for a specific type of packaging.

The problems of dual-purpose data

$4,780

TIME

compilation are obvious: In every given instance we are compiling specifics—identity, size, SIC code for each establishment. In the same instance, we are also compiling relative values—relative importance of each type of packaging in the operations of that establishment.

When it is completed—and we realistically anticipate the program will require several years to complete—we will have a complete and accurate picture of the entire market for packaging. The intensive detail of this picture will not only enable us to provide more nearly perfect market control of our publications' circulations, but, we anticipate that it will also create a brand new service of real value to companies marketing packaging materials, equipment and supplies.

'A Common Statistical Language'

By R. W. BECHTEL
Publishing Director
Dun & Bradstreet, Inc.

Despite the 15-year existence of the Standard Industrial Classification code it is surprising that so simple a device remains a mystery to so many marketers, and that the relatively few companies that do understand it fail to take full advantage of it.

Years ago when industrial marketing was a less complex matter, as much purchasing as it was selling, the consumer marketer was already using as guides such data as incomes and job classification and urban vs. rural population, which could then be related to Government-released statistics. Younger, but in existence long enough to have proved useful despite its recognized faults, SIC offers comparable opportunity to the industrial marketer.

The virtues of SIC are that it provides a common statistical language, with a single set of definitions that are gradually coming to be understood, and that it provides a basis for comparison with source data such as Census statistics. Unless, then, the individual marketer has developed a better and proved way to classify customers and prospects—and can establish industry totals on a comparable basis—he is well advised to use SIC.

► Dun & Bradstreet, as well as other Government and commercial research and publishing organizations, has worked extensively to classify information according to SIC, so that the marketer could make effective use of this common statistical language. Starting in 1950, SIC codes were assigned to each of the 3 million names in the Reference Book, using the 1945 codes. During 1960 the Reference Book is being converted to the 1957 revised code, so that users can relate information to the Census of Business statistics which are being released this year on the basis of the revised code.

Since 1959, when D&B began publishing specialized directories primarily for marketing use, increased attention has been focused on SIC. In the Million Dollar Directory, a marketing guide to 21,000 U.S. businesses with net worth in excess of $1 million, up to seven SIC's are assigned to the activities of listed companies, providing the first treatment in depth of SIC.

In the Metalworking Directory, a marketing guide to 31,000 metalworking plants with 20 or more employees, multiple SIC's are also assigned to a single plant's activities where applicable. In both of these directories, business listings appearing in the main section of the directory are also shown under SIC category; and in the Metalworking Directory, industry statistics are provided separately by county for each of over 180 SIC codes encompassed by the metalworking industry.

In order to tap most effectively the wealth of information in SIC use, the marketer needs to add to each classified account some indication of size; and he must further make these basic assumptions, which are supported by professional marketing experience:

1. That consumption potential follows industry lines, since businesses in the same industry produce similar products from similar materials.

2. That consumption potential is proportionate to size, whether size be measured in terms of numbers of employees, sales volume, area occupied, or value of product added.

When this has been done, the marketer is in position to produce a variety of useful information and to perform a variety of jobs using SIC. While the variations in techniques preclude outlining detailed procedures, the following list of uses of SIC shows its versatility in marketing as well as in other business functions:

In market research

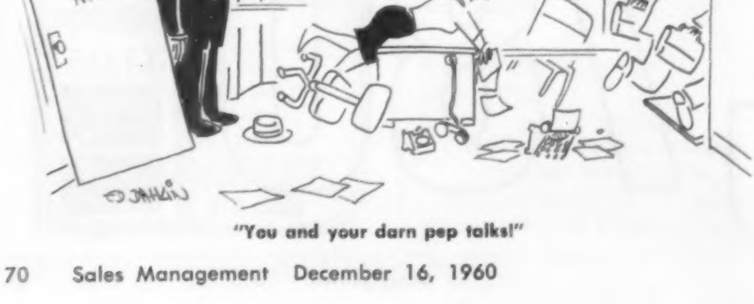
- determining average consumption of products by industry
- determining U.S. market potential by industry
- determining company share of market
- determining potential and share of market by sales territory

In marketing management

- determining sales manpower per territory
- determining sales territory boundaries
- establishing sales quotas
- checking incentive compensation
- appraising territory sales performance
- creating prospect lists by industry and importance
- selecting advertising media
- creating files of product applications
- directing new product development
- determining pricing policies

In other management areas

- making profitability studies



"You and your darn pep talks!"

making accounts receivable analyses

identifying sources of supply

relating production to sales by use-industry groups

'Using SIC in Marketing'

By HUGH BRITTON
Director of Census
McGraw Hill Publishing Co.

The Standard Industrial Classification is designed as a general purpose system for gathering together establishments and presenting significant statistics about them. Its primary purpose is to enable various agencies of the Federal Government to express their statistical output in a common language.

The design and purpose of SIC have important influence on the use of the system in marketing; they should never be overlooked.

Broad classifications, not confined to homogeneous groups of products, do little harm when a statistical picture is being presented; in fact, without them publication of much of the very useful data in literature of the Census Bureau, the Bureau of Old Age and Survivors Insurance, the Bureau of Labor Statistics would be impossible under the law. But marketers are interested in specifics—goods must be sold to people, not to statistical averages. Often, therefore, a particular marketer must use individual variations of the system to make it usable.

SIC is a decimal classification, just as is the Dewey Decimal system which makes it possible to find the books you want in any library. As in the Dewey Decimal system, additional digits create sub-classes and subdivisions of sub-classes. The Bureau of Census, in presenting product statistics in the Census of Manufactures, uses the 5-digit "product class" and the 7-digit "product" to present quantity and value of shipment statistics but not for the input data—number or size of establishments, value of materials, man-hours worked, etc.

In the McGraw-Hill Census, we use an extra digit to split classifications according to our needs. This fifth digit has nothing in common with the "product class" mentioned above; we assign it ourselves, as we need it, to better define the places where we must sell subscriptions to our publications. Many companies follow similar practices. The great advantage of the "extra digit" is that additional detailed information can be recorded without sacrificing comparability with Government and other statistics which are classified by SIC. This is important since such comparisons are among the most effective tools for many marketing purposes.

These comparisons require that records be classified by principal product, since the statistics to which they are to be compared are published that way. Sometimes, however, a principal product may not tell the complete story about a particular customer or prospect. You may have no market for what you have to sell in a plant making only that principal product.

Here is another great advantage of SIC—its use as an indexing system. A plant can be given several SIC codes to cover the principal product and all other products manufactured. If this is done, information about all of the plants making products in a single SIC industry can be developed and examined.

Our McGraw-Hill Census does this. In "America's Manufacturing Plants" (McGraw-Hill Publishing Co.: $25.00) a statistical picture of the number of manufacturing plants of 20 or more employees classified in each 4-digit SIC industry is presented. The table indicates the number of plants so classified by principal product and, separately, the number that make the same products in addition to another which is their principal one. In many instances, the latter figure is larger than the former. Some examples:

SIC 3535—Conveyors and Conveying Equipment: 137 plants manufacturing as principal product; 220 plants manufacturing as secondary product.

SIC 3611—Electric Measuring Instruments and Test Equipment: 192 plants manufacturing as principal product; 268 plants manufacturing as secondary product.

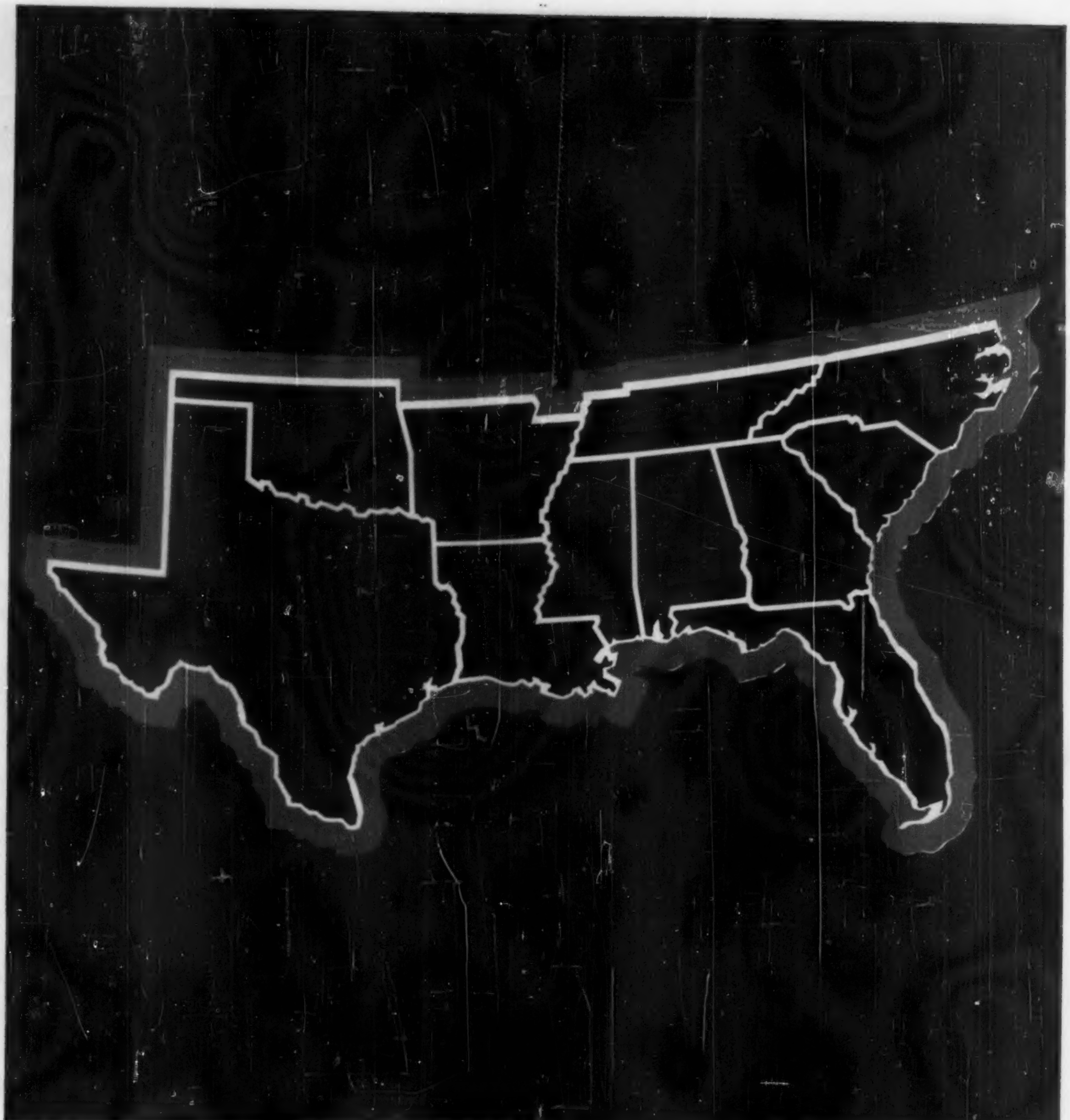
SIC 3631—Household Cooking Equipment: 78 plants manufacturing as principal product; 73 as secondary.

In summary, to get best value from SIC:

1. Make sure that your customers and your prospects are carefully and consistently classified by SIC.

2. Examine the results of this grouping and decide how many digits are needed for your purposes in each major group; in some, two digits may be useful and in others you may need more than four digits.

3. Gather all the information you can about the products of the plants on your list; classify all products. There may be much unmined gold in them thar hills! ◆



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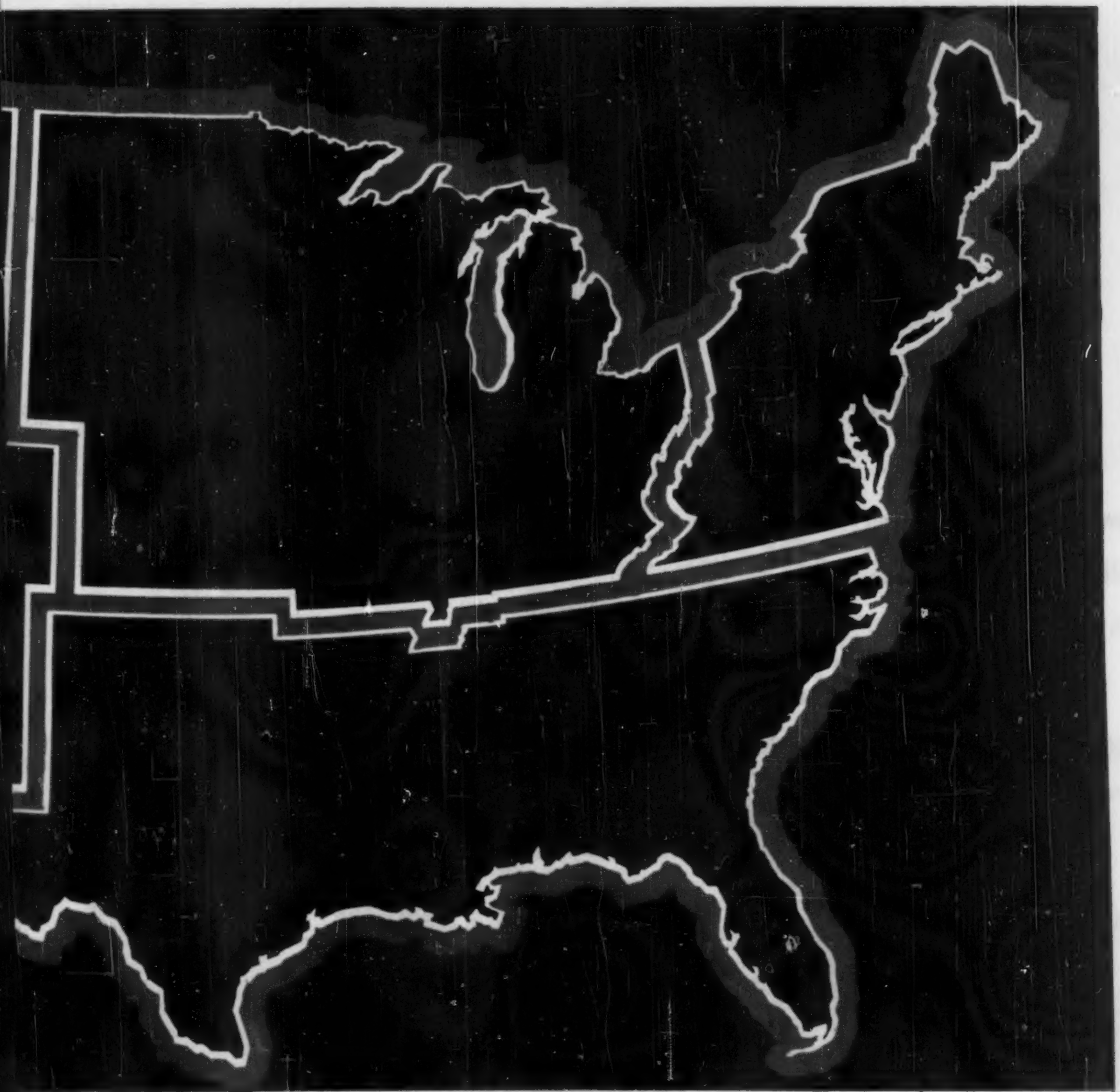


TIME
The Weekly Newsmagazine

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BELL TELEPHONE SYSTEM

WHAT MAKES A LEADER TODAY

Modern business has made the old-style leader as ineffectual today as yesterday's "new" methods. The ripsnorting man of action is being replaced by a quieter man — a thinker and a planner. But not all companies know how to groom such men.

A new dimension in sales leadership is required in today's management picture. It may be called leadership-plus. It reflects profound changes that have taken place in the business corporation since men like Carnegie, Rockefeller, Frick, Morgan, and others were the prime movers in industry, and sales managers were magnetic super-salesmen with cheer-leader personalities who had graduated to the head of the team.

Motivation was of prime importance then. It is now. But, under today's conditions, three additional components are essential. These are: planning, coordinating and measuring.

Today's sales manager, if he is to be an effective leader, must think of his job in terms of **planning** the activities of his department, **motivating** the supervisory personnel and salesmen, **coordinating** the different units of activity, and **measuring** results.

There are people in business who question the need for leadership in a management picture where something resembling power steering of a complex, automated vehicle replaces the dramatic handling of a team of horses all doing the same thing. The role of the individual, many argue, must of necessity be submerged in our present day corporate society and all along the managerial line.

More dynamic management men do not agree. They believe that by re-creating a little of the climate of the free enterprise system at the front line of management, we may also find that we have released a source of energy and brain power that will go much further toward cost reduction and profit improvement than anything else we can do. The trick is to balance leadership freedom with the essential order of modern management.

All human relations strike some kind of balance between freedom and order. Because the stakes are high and because technology demands discipline, the balance in our industrial society has been weighted highly on the side of order. Nevertheless, the focal point at each stage of operation, whether of a society or of a company, is the individual. It is essential for effective decisions and action to keep focusing on the one man charged with leadership at each key point. There can be and should be opportunities for leadership all along the line.

What is the profile of today's leader—specifically in sales? How do we spot him? How develop him?

Sitting in on any sales executives' meeting will reveal that many different types of men become leaders in the field of marketing and selling. But usually we see standing out qualities of personal amiability, likableness, magnetism. These appear to be prime ingredients in the make-up of the man who has reached the top or is on his way to the top in sales.

But while such a man may have

gotten his start because of these qualities, they will not mark him for leadership. Being a darned nice guy with a flair for getting people to buy him and his company's products or services isn't enough. There must be a hard core of other qualities, skills and experience in applying them.

Leadership in sales management requires a man to be a good psychologist, with insight into people and their motives and reactions. It calls for the ability to avoid controversy and steer others away from it, and even a talent for converting controversial or difficult situations to the company's benefit.

The man who will be a leader in the sales field inspires confidence and has the subtle ability to transmit self-confidence to his supervisory and field personnel. He knows how to motivate those answerable to him or, better, fires them to motivate themselves within a given pattern of policy—makes them want to do rather than making them do.

The leader has high standards of integrity and of performance both for himself and for those he is responsible for selecting and training to do the department's work. Depending on his temperament, he will demand these high standards of performance, persuade men to them, or inspire them by example. Those working with him may kick and scream at times against his exacting requirements, the pace he sets for them; but the ones capable of measuring up (the only ones he wants), sooner or later will admit that working under such a man and having the benefit of his training was the greatest thing that ever happened to them because it brought out more than they knew they had in them. No real leader ever tolerates sloppy performance or settles for less than his or another man's best.

▶ But the modern sales manager, besides being a leader, must be an administrator. Top management in business is eager for the sales manager to be a man of sufficiently broad gauge to function effectively and creatively in the management scheme. Here is where he needs the plus qualities: aptitude and experience in planning, coordinating and measuring.

Some large companies have found that the sales manager may be psychologically unable, or unwilling, to take an interest in these more prosaic aspects of the expanding function of sales management. They appear dull, even grubby, by comparison with the more dynamic elements of the sales job. There must be less personal participation, more delegating. The sales manager relinquishes identification with the work itself, gives up being a salesman in the basic sense. He now sets a plan and knows how to get others working it.

Being a leader in the broadest sense means to pull away from the actual work. This is hard because, like an engineer, for example, the sales manager has been a specialist. He has been inclined to think of himself as primarily a better, more seasoned salesman.

The new type of sales leader needs the auxiliary qualities named because he must multiply his capabilities and efforts. He accomplishes this by teaching and motivating—developing men. He also does it by broad-scale planning of their activities and by long-range planning of his total job. He does it by measuring markets; measuring performance; measuring results.

The old-style leader was a man of action, on the go, issuing orders. Today's leader-administrator is in some ways an almost opposite type. A great deal of study, thinking, organizing go into his job. An expert in

Open the big front door to Canada

There's a warm welcome awaiting you. Millions of friendly people with money to spend and a willingness to spend it. A lively $15,000,000,000 retail market. But, to sell Canada—make no little plans. Consider Weekend Magazine/Perspectives—the big front door into more than 1,880,000 prosperous homes.

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the techniques of planning, he must know where to get and how to use information.

This brings us to a prime requisite of the new type of sales leader: He must be willing to use staff help and be skilled in its application to his problems; otherwise, he will be very much restricted. The sales manager accustomed to playing it by ear, for example, may assume that because his department has gained in customers and sales volume over the years and the company is making a profit, all is well and he is doing a good job.

But you can go broke making a profit. You can lose ground even with a rising sales curve. What mastery of planning, coordinating and measuring and the effective use of information fed to him by staff people would have taught this man is that while his company was making a profit the profit was not big enough. Although his sales curve had continued to mount, markets had been growing up all around him and competitors were becoming entrenched in them.

Satisfactory performance, high performance, is not just demanding more and more of the business and being satisfied with obtaining it. It is realizing what a company's position is in relation to potential and competition; learning, through the use of staff studies, when to organize differently, when, where, how to expand or contract, when to make changes or shifts in personnel. It means knowing what studies to make to elicit the necessary information for planning and action.

Measuring (or controlling) – the "feed-back"–is the last essential of leadership-plus. It involves more than ordinary or superficial evaluating. It includes establishing objectives against which to evaluate. Evaluation or measuring must be done with a purpose. It is one of the toughest things to pin down. Without it, no sales leader is successful enough.

All of the four basic qualities of leadership-plus work together. The man chosen for and gifted with leadership, with the ability to develop others and get them into effective action, will lean on planning to set up measures to take correct action, and have the knowledge, experience and information to recognize what constitutes good performance in relation to objectives.

► How does a company discover men with the potentialities for the leadership position, as described? Executives of companies that have perfected techniques in this field tell us that they look for the man with natural initiative, one who appears to be a self-starter, who apparently relies more on himself than on others but has no problems in working with others, whether above or below him in function. It is a moot point whether the desired qualities can be spotted in a young man at the start of his career. Still, there is more likelihood of finding potential leaders by looking for certain outstanding characteristics.

It may be that men become leaders because, from boyhood or early manhood, they have **looked like** leaders. Teachers, elders have picked them to hold responsibility; their fellows have looked to them for leadership; and existing or latent qualities have been brought out or developed. This is why it is valuable to look at a man's record as far back as possible. In working with a man who inspires confidence, the others feel they are associated with a winner. This in turn builds up the potential leader.

One characteristic to look for is respect for other people, for their efforts and accomplishments, and the self-confidence to provide opportunities for them and give them credit where it is earned. A leader gains respect by showing respect.

The potential leader should also have native mental capacity and the ability to see the significance of relationship of parts to a whole. He must be able to grasp divergent factors and see them in perspective.

It is equally important that a man marked for leadership have the willingness to accept responsibility. Such a man can be spotted because he may not wait to have it thrust upon him. The non-leader type, given a 50-50 choice, is more apt to shun responsibility. The leader-type will watch for the 1% opportunity to take responsibility and accept it even though it may mean longer hours and heavier work.

► Developing the leader is as important as finding the "material." Some of our leading corporations have management development programs which reach all the way down to local functions of company operation to appraise men. The appraisal is constant and consistent, all along the line. Its objective is not for purposes of compensation, for simply looking over a man's shoulder to decide if he's worth keeping in the job, it's a positive evaluation system designed to uncover latent abilities and give the man possessing them the opportunity to develop and improve his position. It first finds the men capable of development and then provides the means.

It is necessary for the success of such a program to recognize a man's limitations as well as his potential. You probably cannot create a leader; you can train and develop a manager. A man can become a good manager even with weakness in leadership. If not much personal motivating of others is required, he will get by, although he'd be more effective if he had it. But given the basics of leadership, it can be brought out in a number of ways.

He can be encouraged to enlarge his thinking. Take, for example, one company's work with men still at supervisory levels but marked for growth opportunities. At first, only a great deal of discussion enabled some of these men to think of their jobs in different terms from those that applied to the work of the men they were supervising. With encouragement, they gradually visualized their function in terms of directing others, planning or thinking ahead on

matters falling within the area of their operation, considering how their crews could work together better towards a common objective, and striving to control results.

In brief, a district sales manager, for example, would get his supervisory personnel to see their jobs in terms of planning, motivating, coordinating, and measuring. Here is the foundation of leadership-plus being laid far down in the ranks. For the first time, the men in question begin to realize what the job of management really means.

On a different level, one of the country's progressive basic industrial companies had an opportunity to study top-level leadership qualities when certain fortuitous circumstances put it in the hands of four different presidents. Certain common denominators gradually appeared. It became clear that the retained responsibility of the top man was definitely not one of selling, producing, engineering, or whatever was the department of management studied. It was rather one of planning, motivating, coordinating and controlling these various functions and specialties of the business for most effective over-all results.

It proved most interesting—and inspiring—to the foreman and the sales supervisor to learn that their jobs as front line supervisors could be expressed in exactly the same terms as the job of the president of the company, the only difference being the scope of responsibility. It was apparent that through such job perspective a great potential was released in enthusiasm, feeling of responsibility, and job satisfaction. And the climate was created for development of leadership in the individuals gifted in this direction.

There is one thing to watch here. Job enthusiasm and satisfaction is not truly possible, and leadership development will not be genuine, unless front-line managers actually are given the opportunity to exercise the four basic processes of management. This is where organization planning comes in.

We have this explanation from one perceptive planner: "While organization planning is a part of the broader management job as a whole, it provides the foundation on which all the rest of the management processes are built. Or, stated in another way, it provides the framework in which to build a complete management responsibility. It is concerned with both the broad structure of the business as a whole, and the individual structure of a single management position—such as sales. It includes the accomplishment of objectives, the performance of functions, the proper maintenance of relationships.

"The important thing is that through organization planning we can start building into every manager's job, from top to bottom, a more complete management responsibility—that is, more opportunity to plan, coordinate, motivate, and measure results within a defined area of responsibility."

► Men who are to be given a chance to develop for leadership roles, in short, need to be given the chance to take responsibility in small doses. Better development is possible when men are started at the front positions at the earliest opportunity—the maximum chance to exhibit and use their own initiative.

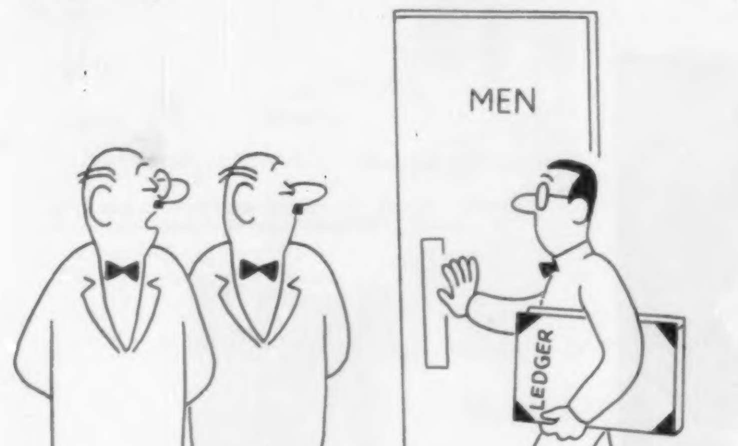
The earlier you give a man the opportunity to know he has to live with his mistakes, the earlier he will develop responsibility and build confidence in his ability to make decisions. This will not happen when decisions are made for him. Higher-level management can do much to push down responsibility and open up chances for the development of the initiative that flowers into leadership in more people at more levels all the way to the lowest supervisory positions.

Some companies permit their jobs to become so procedural that there is no way to begin to develop leadership. Best results ensue if, at all levels, you can say to men: Here is an objective. See what can be accomplished within the given limits. This is often done. But in most instances the limits could be broader than they are.

A company may earmark men for leadership or management roles but never give them adequate chances to develop. Then placed in positions of responsibility they may, most likely will, make mistakes that can be costly. They have not had the opportunity to develop confidence in their own ability to make decisions and now run the risk of losing what confidence they have. The lower down a man begins to learn these attributes of leadership, the better for him and for his company.

No management, at whatever level, can get to know the resources of potential leadership it has unless leeway is provided for men to show it early and cultivate it early and late. ◆

Serves Us Right



"I like the efficient way Higgins makes use of his time."

Here's the
industrial market
picture as it was
10 years ago...

(mfg. employment index,
000's omitted)

to see how
it looks *today*
lift this page

DO YOU KNOW <u>WHERE</u> YOUR MARKET POTENTIAL IS TODAY?

INDUSTRY ON THE MOVE

Plant Locations in Metro Areas by SIC Codes

Employment and Shipment Gains in SIC Industries for 1947-1960

Growth Analysis of Leading Corporations

Half of the shipments of all manufacturing in the United States are accounted for by the 5,700 plants with over 500 employees each. They are the key prospects for any industrial marketing program since they will make more than half of all industrial purchases. Of these plants, 4,661, with 7,438,700 workers (or 46% of total manufacturing employment), are in the 300 metropolitan areas recognized and defined by Sales Management. (See the November 10 "Marketing on the Move" issue of SM for a full discussion of the latest metropolitan area definitions).

Key Plant Locations by Metropolitan Areas

We present here, as a "first", the distribution of these plants by metropolitan areas and according to the new 4-digit code used for the first time by the Government in the 1958 Census of Manufacturing, which will be released shortly.

The data are taken from "Directory of Key Plants", a new directory just published by Sales Management. In addition to the data appearing in the following pages, the directory gives plant names, addresses and product descriptions, along with classifications by county and SIC codes. For example, the first listing below shows 1 plant in 2211 in the Birmingham, Ala., metropolitan area. In the directory this plant is identified as the Avondale Mills, Comer Building, Birmingham, makers of cotton and broad woven goods, with 700 employees. It is classified in 2233 (old SIC code) and 2211 (new SIC code).

We believe the data published here and in the directory to constitute a unique contribution to industrial marketing because it is a close approximation to a census of all large manufacturing plants in all industries, including metalworking and all others. As a matter of fact, the only counterpart to it is the Classified Industrial Directory used by the Census Bureau in the planning and execution of the quadrennial Censuses of Manufacturing. But because the government is prohibited by law from disclosing information on the operations of particular plants, the official Classified Industrial Directory can never be made public. Since no such prohibition applies to private agencies we have tried to fill the gap.

The research staff of Sales Management has long been in a strategic position to compile such a directory, first, because our close association with industrial market research problems revealed the great need for such a tool, second, because we have had over 30 years of association with chambers of commerce, local and regional planning commissions and other agencies in the assembly and evaluation of local economic data. The Census Bureau could tell us pretty much what to look for, namely, that in each county there were so many plants of a given size in specified 4-digit SIC classifications. We could then solicit information on these plants from informed local agencies. Other avenues of information available were state and local industrial directories, and correspondence with the plants themselves.

SIC Codes: Old vs. New

We employ the new 4-digit SIC code here, which is the one fully defined in the "Standard Industrial Classification Manual," available for $2.65 from the Superintendent of Documents, Washington 25, D.C. While published in 1957 after many years of research, the new code was first used in the 1958 Census of Manufactures, and the first results of this will be released in 1961. Therefore our feature can be regarded in part as an anticipation of these Census results. The relation of the old and new SIC codes was fully discussed in our July 10, 1959 Survey of Industrial Buying Power. (See, for example, "From the Old to the New 1957 SIC," by Harold T. Goldstein, page 53).

Plant Data on Shipments

We show on pages 112-122 a summary of data on employment and shipments for 1960 for all 4-digit industries. The estimates have been made on the old basis because the Census Bureau has so far found it possible to release 1958 Census data (from which our estimates are of necessity projected) on the basis of the old 4-digit code only. As soon as the new basis becomes available Sales Management hopes to publish the 1960 projections according to the new SIC codes.

(Continued on page 110)

Plant Locations in Metropolitan Areas by SIC Codes

SM Estimates, 1959, for Plants (500 or more employees) and Employment

SIC Code	Plants	Employment (thous.)
ALABAMA		
BIRMINGHAM		
2211	1	.7
2651	1	.7
2711	1	.7
3241	1	.7
3296	1	.8
3312	9	41.3
3321	3	3.4
3441	1	.7
3443	2	1.4
3494	2	2.2
3535	1	1.2
3721	1	6.3
3742	1	1.2
Total	25	61.0
GADSDEN		
2211	1	1.5
3011	1	3.2
3312	1	5.6
3321	1	1.1
Total	4	11.4
HUNTSVILLE		
2211	1	1.7
3141	1	.7
3721	3	12.5
Total	5	14.9
MOBILE		
2611	1	1.0
2621	2	2.6
2643	1	3.0
3334	1	.7
3731	1	1.8
Total	6	9.1
MONTGOMERY		
2211	1	1.5
Total	1	1.5
TUSCALOOSA		
2643	1	1.6
3011	1	1.3
3321	1	1.5
Total	3	4.4
△ANNISTON		
2211	1	.7
2296	2	2.4
2298	1	.7
3321	2	1.4
3671	1	1.7
Total	7	6.9
△FLORENCE-SHEFFIELD-TUSCUMBIA-MUSCLE SHOALS		
2254	1	.5
3334	1	1.8
3362	1	1.7
3711	1	.7
Total	4	5.0
ARIZONA		
PHOENIX		
2711	1	.6
3362	1	2.0
3441	1	.5
3571	1	.6
3662	1	2.0
3729	2	5.3
Total	7	11.0
TUCSON		
3721	1	5.0
3729	1	1.5
Total	2	6.5
ARKANSAS		
FORT SMITH		
2511	1	.8
2649	1	.6
3211	1	.6
3639	1	.8
Total	4	2.8
LITTLE ROCK-NORTH LITTLE ROCK		
2328	1	.8
2329	1	.6
3621	1	.8
3641	1	.6
3871	1	.8
Total	5	3.6
CALIFORNIA		
FRESNO		
2034	1	.5
2084	1	.7
2086	1	.6
3579	1	.7
3721	2	2.3
3729	1	.7
Total	7	5.5
LOS ANGELES-LONG BEACH		
2011	1	1.2
2024	1	.7
2026	3	4.6
2031	2	2.1
2033	1	3.0
2037	1	.8
2051	4	3.7
2082	1	.5
2086	1	.8
2099	1	.5
2253	1	1.2
2339	1	1.3
2342	1	.9
2514	2	1.2
2541	1	1.5
2711	4	7.9
2752	1	1.0
2771	1	.5
2782	1	.8
2819	3	4.6
2841	2	1.2
2851	1	.6
2892	1	.5
2899	1	.6
2911	5	17.8
2952	1	1.2
3011	5	9.9
3069	2	1.3
3079	1	.5
3141	1	.5
3221	3	2.1
3241	3	2.1
3253	2	2.6
3271	1	.5
3312	3	8.1
3321	1	.5
3361	1	.9
3352	2	4.1
3357	1	.9
3391	1	.8
3411	1	1.8
3423	1	.6
3429	1	.8
3433	1	1.0
3442	1	2.5
3443	3	6.6
3444	1	.5
3482	1	.6
3461	1	.8
3494	1	.5
3499	2	1.4
3533	3	4.9
3544	1	.6
3553	1	2.0
3559	1	.8
3561	4	3.8
3569	1	.9
3571	4	5.7
3585	2	3.2
3583	1	.5
3589	2	1.3
3599	1	.8
3611	2	8.6
3622	1	3.3
3629	1	.6
3631	3	3.8
3639	1	.9
3651	2	3.7
3652	1	1.2
3662	1	4.8
3672	1	3.0
3679	17	33.7
3691	1	8.2
3711	6	11.3
3714	1	1.0
3721	17	142.1
3722	1	5.8
3729	25	47.4
3731	2	1.7
3811	3	3.1
3821	5	7.1
3822	1	1.2
3831	1	1.4
3841	1	.5
3951	1	.5
3993	1	.6
3999	1	.6
Total	202	432.5
SACRAMENTO		
2033	1	2.0
2711	1	.6
3241	1	.6
3312	1	8.0
3632	1	.6
3639	1	1.0
3679	1	1.0
3722	1	6.0
3729	2	7.0
Total	10	26.8
SAN BERNARDINO RIVERSIDE-ONTARIO		
2037	1	.6
3352	1	1.0
3551	1	.5
3611	1	.6
3729	1	2.0
Total	5	4.7
SAN DIEGO		
2031	2	1.2
2327	1	.9
2711	1	.9
3662	1	11.6
3673	1	.7
3721	2	46.5
3722	1	4.0
3729	2	2.6
3731	1	.8
Total	12	68.6
SAN FRANCISCO-OAKLAND		
2011	1	.7
2013	2	1.5
2024	1	.6
2326	1	.8
2032	1	.5
2033	4	4.1
2042	1	.7
2046	1	2.0
2052	1	1.0
2062	1	1.0
2063	1	.8
2071	1	.6
2082	1	.6
2328	1	1.0
2337	1	.8
2394	1	.5
2499	1	.8
2515	1	1.2
2621	1	1.2
2643	1	1.4
2651	1	.8
2711	3	3.7
2752	2	1.5
2761	2	1.5
2812	1	1.0
2813	1	.9
2818	1	.8
2819	1	.5
2831	1	.6
2841	1	.6
2851	1	3.0
2873	1	.6
2893	1	.6
2911	3	6.0
3121	1	.6
3221	3	2.6
3241	1	.5
3312	5	8.1
3322	1	.6
3332	1	.8
3391	1	.6
3411	2	3.2
3429	1	1.6
3431	1	.7
3441	1	.9
3442	1	.5
3519	3	2.3
3544	1	.5
3561	2	1.2
3571	2	4.2
3611	1	.6
3613	2	1.5
3622	1	5.2
3661	2	3.3
3662	1	1.0
3673	1	1.1
3679	2	2.6
3711	4	4.9
3714	1	1.0
3729	3	2.3
3731	3	2.8
3861	1	.7
Total	93	100.8
SAN JOSE		
2033	5	4.8
2037	1	.6
2431	1	.6
2711	1	.6
2819	1	2.1
3241	1	.6
3497	1	.9
3551	1	.6
3571	1	2.0
3611	1	1.5
3612	1	2.9
3671	1	1.2
3711	2	5.0
3721	1	.9
3729	2	19.0
3861	1	.7
Total	22	44.0
SANTA BARBARA		
3721	1	.7
Total	1	.7
STOCKTON		
2033	3	2.5
2034	1	.8
2431	1	.6
2651	1	1.0
3544	1	.5
Total	7	5.4
△MODESTO		
2033	1	1.2
2084	1	.5
Total	2	1.7
△VENTURA-OXNARD		
2911	1	.6
Total	1	.6
COLORADO		
DENVER		
2011	2	1.8
2052	1	.6
2082	1	.9
2711	1	.6
2819	1	1.1
3011	1	.5
3069	1	4.0
3161	1	1.5
3631	1	.8
3721	1	.9
Total	11	12.7
PUEBLO		
3312	1	8.5
Total	1	8.5

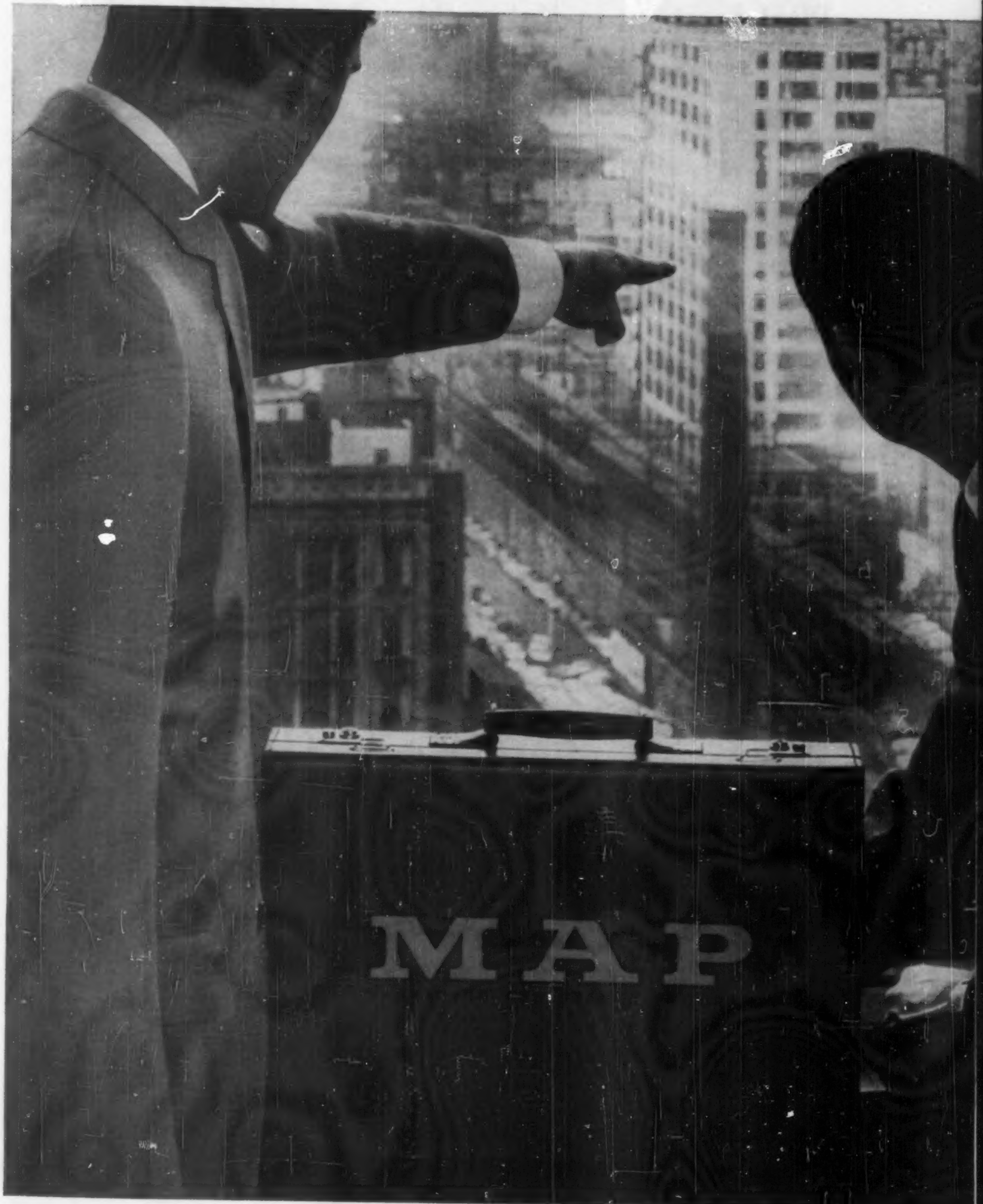
△Denotes SM potential metropolitan area

Plant Locations in Metropolitan Areas by SIC Codes

SM Estimates, 1959, for Plants (500 or more employees) and Employment

SIC Code	Plants	Employment (thous.)
CONNECTICUT		
BRIDGEPORT-STAMFORD-NORWALK		
2342	1	1.6
2382	4	4.7
2721	1	.9
2761	1	1.0
2844	1	.6
3069	2	1.7
3172	1	.8
3292	1	1.5
3351	2	3.5
3357	1	.8
3361	1	.5
3429	2	1.8
3494	1	1.2
3541	1	3.0
3553	1	1.5
3599	1	.8
3561	1	.8
3562	2	1.7
3571	1	2.2
3579	1	1.6
3581	1	.6
3584	1	1.0
3621	1	.8
3631	1	.7
3636	1	1.4
3639	1	1.1
3643	3	2.3
3662	1	.8
3693	1	.6
3694	1	.7
3699	1	.8
3714	2	1.6
3721	2	1.6
3722	1	5.6
3811	1	.7
3942	1	.9
Total	47	94.0
HARTFORD-NEW BRITAIN		
2111	1	.8
2221	1	.8
2283	1	.9
2711	2	1.6
2732	1	.8
2819	1	1.1
3351	1	.8
3429	2	3.6
3449	1	.6
3481	1	1.7
3452	1	.6
3481	1	1.7
3541	2	3.3
3569	1	.6
3562	4	10.3
3566	1	.8
3571	1	1.7
3572	2	8.1
3579	1	.7
3622	2	2.0
3639	1	1.7
3643	1	1.8
3721	1	1.5
3722	1	26.0
3723	3	9.2
3729	1	.5
3871	2	2.8
3981	1	.9
Total	39	86.5
NEW HAVEN-WATERBURY		
2341	1	.5
2591	1	.8
2631	1	1.0
2651	1	.8
2821	1	.5
2843	1	1.5
3011	1	1.1
3021	1	4.8
3069	2	2.7
3079	1	.8
3315	2	1.5
3322	1	.8
3351	6	6.1
3429	1	2.0
3432	1	2.0
3452	1	.6
3499	1	.5
3548	1	.8
3569	1	.7
3581	1	.8
3582	1	3.2
3599	1	.8
3621	2	1.3
3661	1	.8
3722	3	4.4
3842	1	.8
3871	4	4.8
3914	3	2.1
3941	1	2.0
3964	1	8.2
Total	45	54.8
△MIDDLETOWN		
3021	1	.8
3622	1	1.3
3631	1	.6
Total	3	2.7
△NEW LONDON-NORWICH		
2221	1	.8
2833	1	1.4
3429	1	.8
3731	1	6.4
Total	4	9.4
DELAWARE		
WILMINGTON		
2261	1	1.3
2818	1	.8
2818	2	8.1
2819	1	.7
2892	1	3.0
3069	1	.8
3079	1	.7
3111	2	1.4
3221	1	1.6
3312	1	2.5
3554	1	.7
3599	1	.5
3711	2	8.5
3882	1	3.3
Tota	17	33.9
DISTRICT OF COLUMBIA		
WASHINGTON		
2026	2	1.5
2711	2	2.7
2721	1	1.1
2751	1	.7
3569	1	1.1
3679	2	5.2
3729	1	1.9
Total	10	14.2
FLORIDA		
FORT LAUDERDALE-HOLLYWOOD		
3271	1	.5
Total	1	.5
JACKSONVILLE		
2121	1	2.0
2621	2	1.1
2711	1	.5
3731	2	3.2
Total	6	6.8
MIAMI		
2097	1	.5
2022	1	.5
2541	1	.5
2711	2	1.8
3271	1	.9
3429	1	.5
3432	1	.5
3442	1	.6
Total	9	5.8
ORLANDO		
2711	1	.6
Total	1	.6
PENSACOLA		
2299	1	.5
2611	1	.5
2621	1	.7
2643	1	1.9
2824	1	4.0
Total	5	7.6
TAMPA-ST. PETERSBURG		
2037	1	.6
2121	4	3.3
2871	1	.9
3411	1	.7
3662	1	1.1
3729	2	2.0
3731	1	.8
Total	11	9.4
WEST PALM BEACH		
3722	1	3.0
Total	1	3.0
△LAKELAND		
2871	5	4.0
3411	1	.7
3551	1	.7
Total	7	5.4
△PANAMA CITY		
2611	1	.8
2621	1	.8
Total	2	1.6
△TALLAHASSEE		
2445	1	.9
Total	1	.9
GEORGIA		
ALBANY		
2284	1	.8
Total	1	.8
ATLANTA		
2036	1	.8
2052	1	1.1
2087	1	.8
2211	3	3.6
2252	1	.5
2284	1	.7
2298	1	.8
2321	1	1.4
2342	1	1.2
2515	2	1.6
2653	1	1.3
2711	1	1.7
3111	1	.6
3221	1	.8
3312	1	1.6
3711	4	7.1
3721	1	15.0
3951	2	2.2
Total	25	42.8
AUGUSTA		
2211	4	7.1
2221	1	.9
2261	2	3.8
2819	1	8.0
3255	1	.8
Total	9	20.6
COLUMBUS		
2071	1	.8
2211	2	3.1
2251	1	.5
2298	2	1.6
Total	6	6.0
MACON		
2295	1	1.9
2441	1	.5
2621	1	.6
2641	1	.5
3255	1	.6
Total	5	4.1
SAVANNAH		
2062	1	.7
2611	1	.5
2621	1	.6
2643	1	5.1
3715	1	.8
3731	1	.8
Total	6	8.5
IDAHO		
△BOISE		
2037	1	1.5
Total	1	1.5
ILLINOIS		
CHICAGO		
2011	8	8.5
2013	4	2.0
2025	2	4.7
2031	1	2.0
2033	3	5.1
2045	1	1.0
2046	1	2.0
2051	6	11.7
2052	6	6.3
2071	8	11.6
2073	1	1.2
2082	1	.8
2086	1	.6
2087	1	.5
2099	3	2.0
2241	2	1.8
2271	1	1.5
2293	2	1.2
2299	2	1.6
2311	4	4.1
2331	1	.6
2335	2	1.7
2342	2	1.2
2441	1	1.0
2499	1	.9
2511	1	.5
2512	1	2.4
2514	3	1.6
2515	1	1.0
2522	1	.9
2642	1	.8
2641	1	1.0
2644	1	.8
2651	6	4.1
2653	1	.5
2654	1	.7
2655	1	1.3
2711	4	8.8
2721	2	1.2
2731	3	4.3
2741	1	.8
2751	4	2.7
2752	5	11.4
2761	1	2.2
2771	2	1.1
2782	1	.7
2815	1	.5
2819	2	7.9
2834	3	6.2
2841	3	2.2
2844	2	2.4
2851	2	2.8
2872	1	.5
2892	1	.9
2899	2	1.4
2911	1	1.1
2999	1	.5
3069	2	2.2
3079	4	3.1
3111	1	.9
3141	1	3.6
3161	1	.6
3229	1	.7
3269	1	.5
3292	1	2.5
3293	2	2.6
3312	6	24.1
3313	1	1.5
3315	2	3.0
3321	1	.5
3322	1	.6
3323	6	6.1
3351	2	1.5
3352	1	1.9

△Denotes SM potential metropolitan area



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Optical Journal and Review of Optometry • Jewelers' Circular-Keystone • Food Engineering
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ASSISTANCE PROGRAM

Plant Locations in Metropolitan Areas by SIC Codes

SM Estimates, 1959, for Plants (500 or more employees) and Employment

SIC Code	Plants	Employment (thous.)
CHICAGO (Cont'd)		
3361	3	4.6
3362	2	1.2
3369	3	3.6
3391	6	4.8
3411	7	7.8
3429	1	.7
3433	2	1.7
3141	1	.6
3442	1	.5
3443	2	1.2
3452	5	4.4
3461	8	9.6
3481	3	1.7
3491	2	1.8
3494	3	9.1
3499	1	.7
3519	4	10.8
3522	6	15.7
3531	6	9.3
3535	2	2.7
3536	1	1.0
3537	1	1.0
3542	8	9.2
3544	1	.7
3545	2	1.3
3548	1	1.1
3551	1	.5
3556	3	3.6
3561	4	3.4
3562	1	.5
3566	1	1.5
3567	1	.5
3569	1	3.0
3571	2	2.8
3572	1	.6
3579	4	3.8
3581	5	5.7
3585	3	2.4
3586	1	.9
3599	2	1.8
3611	2	1.6
3612	2	2.3
3613	2	1.9
3619	2	1.2
3621	1	.6
3622	2	1.5
3629	2	1.7
3631	4	5.2
3632	1	1.0
3633	1	7.5
3636	1	1.2
3639	3	4.5
3642	1	2.0
3643	1	.7
3651	16	30.1
3661	7	39.2
3672	2	1.4
3679	15	13.0
3694	3	4.8
3711	4	6.3
3714	6	4.9
3722	2	5.5
3729	2	2.1
3741	2	10.0
3742	2	7.3
3751	1	1.1
3811	1	.5
3821	7	4.3
3842	3	4.0
3861	3	6.3
3871	2	1.9
3911	2	1.4
3931	1	1.7
3941	1	.7
3949	1	2.5
3987	1	.5
3993	1	.5
3999	1	.5
Total	381	529.1
DAVENPORT-ROCK ISLAND-MOLINE		
2011	1	1.0
2431	1	.6
3021	1	1.2
3322	2	1.2
3323	1	.8
3352	1	2.1
3433	1	.5
3522	10	15.6
3582	1	.8
3639	1	.5
3811	1	1.7
Total	21	26.0
DECATUR		
2046	1	3.3
2092	1	.5
2335	1	.5
2711	1	.8
2821	1	.5
3322	1	.7
3494	1	.9
3522	1	3.5
3585	1	.5
3714	1	.6
Total	10	11.5
PEORIA		
2011	1	.5
2046	1	1.3
2082	1	1.0
2085	2	2.5
2335	1	.6
2643	1	.7
3312	1	2.6
3522	1	21.5
3531	1	1.3
Total	10	32.1
ROCKFORD		
2511	1	.5
3391	1	.5
3411	1	.9
3429	3	5.9
3452	2	1.8
3522	1	1.6
3541	5	4.1
3552	1	1.2
3561	1	.5
3566	1	.6
3714	2	1.3
3723	1	.9
3729	1	.5
3821	1	.9
Total	22	21.2
SPRINGFIELD		
2041	1	1.0
3522	1	6.5
3611	1	3.8
Total	3	11.3
△BLOOMINGTON		
2071	1	.5
3635	1	1.5
3679	1	1.5
Total	3	3.5
△DANVILLE		
2033	1	.8
3322	1	1.8
3612	1	4.0
3651	1	.5
Total	4	7.1
△GALESBURG		
3431	1	.5
3444	1	1.0
3519	1	1.7
3586	1	1.4
Total	4	4.6
△KANKAKEE		
2042	1	.8
2252	1	.8
2812	1	.9
2834	1	.5
3433	2	1.8
3522	1	.8
Total	7	5.6
△QUINCY		
3522	1	.8
3561	1	1.6
3651	1	1.3
Total	3	3.7
INDIANA		
ANDERSON		
2033	1	.6
3253	1	.7
3642	1	7.5
3694	2	18.0
Total	5	26.8
EVANSVILLE		
2011	1	1.2
2041	1	.8
2121	1	.6
2711	1	.5
2821	1	.6
2834	1	1.3
3429	1	.8
3441	1	.6
3531	1	1.8
3632	2	5.1
3714	1	.8
Total	12	14.1
FORT WAYNE		
2011	1	.6
2042	1	1.0
2051	1	.7
2251	1	.7
2311	1	.7
3069	1	2.5
3312	1	.6
3351	1	1.0
3367	2	1.0
3531	1	.5
3561	1	1.0
3586	1	1.5
3599	1	.8
3612	1	6.9
3621	5	4.7
3651	1	3.0
3679	1	1.4
3713	1	5.9
3714	2	2.4
3715	1	1.0
3729	1	1.3
Total	27	39.2
GARY-HAMMOND-EAST CHICAGO		
2046	1	1.0
2241	1	.5
2815	1	.5
2732	1	.9
2818	1	.6
2819	1	.6
2841	1	1.4
2911	3	11.1
3079	1	.5
3241	1	1.2
3312	9	62.4
3317	2	1.7
3323	2	1.4
3441	1	1.6
3443	2	1.7
3452	1	.7
3461	1	2.2
3499	1	.8
3562	1	.5
3714	2	1.7
3741	1	1.4
3742	3	5.4
3943	1	.6
Total	30	100.6
INDIANAPOLIS		
2011	2	3.9
2033	1	.5
2051	3	1.5
2092	1	.8
2099	1	.5
2281	1	.5
2381	1	.5
2431	1	.5
2641	1	.5
2653	1	.7
2711	1	1.6
2814	1	.8
2834	2	7.4
2899	1	.6
2999	1	.5
3011	1	1.2
3069	1	.7
3221	1	.6
3321	1	1.4
3322	1	.8
3351	1	1.2
3391	1	.8
3425	1	.5
3433	1	.9
3443	1	1.0
3461	1	.5
3499	2	1.9
3522	1	.6
3531	2	1.4
3562	1	.7
3566	4	6.6
3622	1	.5
3651	2	2.2
3652	1	6.1
3661	1	7.6
3679	1	.5
3711	1	2.3
3713	2	5.0
3714	2	5.7
3722	1	11.9
3911	1	.6
Total	53	82.6
MUNCIE		
2011	1	1.1
2514	1	.6
3221	1	3.0
3291	1	.8
3612	1	2.0
3691	1	1.2
3711	1	1.5
3714	1	1.5
Total	8	11.7
SOUTH BEND		
2082	1	.7
2321	1	.8
2325	1	.5
2511	2	1.0
3069	2	7.7
3522	1	2.5
3541	1	.9
3600	1	1.0
3566	2	1.4
3711	1	20.0
3729	2	14.2
Total	15	50.7
TERRE HAUTE		
2082	1	1.5
2823	1	.8
2999	1	2.7
3699	1	3.0
3722	1	1.8
Total	5	9.8
△ELKHART		
2651	1	.5
2834	1	1.2
3442	2	1.2
3494	1	.8
3651	1	1.5
3621	1	2.5
3931	1	.7
Total	8	8.4
△KOKOMO		
2781	1	.6
3312	1	2.8
3341	1	3.0
3679	1	4.0
3714	2	5.2
Total	6	15.6
△LAFAYETTE		
2433	1	1.2
3069	1	1.7
3352	1	2.5
3481	1	.8
3611	1	1.5
3714	2	2.6
3742	1	.6
Total	8	10.8
△MARION		
3079	1	.5
3221	2	1.7
3367	2	?.0

△Denotes SM potential metropolitan area

Plant Locations in Metropolitan Areas by SIC Codes

SM Estimates, 1959, for Plants (500 or more employees) and Employment

SIC Code	Plants	Employment (thous.)
3641......	1	.7
3672......	1	1.8
3711......	1	1.2
3714......	1	.7
Total......	9	8.6
△MICHIGAN CITY		
3433......	2	1.2
3522......	1	1.3
3531......	1	1.3
3551......	1	.5
3729......	1	.5
3742......	1	1.4
Total......	7	6.2
△RICHMOND		
3357......	1	.8
3522......	1	.9
3541......	2	1.5
3585......	1	3.7
3631......	1	2.0
3713......	1	.7
3714......	1	.6
Total......	8	10.2
IOWA		
CEDAR RAPIDS		
2011......	1	2.3
2043......	1	1.1
2046......	1	1.0
3522......	1	.7
3531......	2	1.8
3651......	1	5.0
3715......	1	.5
Total......	8	12.4
DES MOINES		
2011......	1	1.6
2711......	1	1.2
2721......	2	2.5
3011......	2	1.7
3522......	3	3.5
Total......	9	10.5
DUBUQUE		
2011......	1	2.4
2431......	2	1.6
3522......	1	1.1
3661......	1	.6
3662......	1	.7
Total......	6	6.4
SIOUX CITY		
2011......	3	3.6
3651......	1	.8
Total......	4	4.4
WATERLOO		
3522......	1	4.6
3633......	1	.5
Total......	2	5.1
△CLINTON		
2046......	1	1.5
2431......	1	.5
2821......	1	1.2
Total......	3	3.2
△MASON CITY		
2011......	1	1.5
3241......	1	.6
Total......	2	2.1
KANSAS		
TOPEKA		
2711......	1	.5
2821......	1	.7
3011......	1	1.7
Total......	3	2.9
WICHITA		
2011......	1	2.3
2711......	1	.5
3433......	2	2.5
3585......	1	.6
3721......	4	40.6
Total......	9	46.5
KENTUCKY		
LEXINGTON		
3572......	1	2.4
3641......	1	.5
Total......	2	2.9
LOUISVILLE		
2045......	1	.7
2085......	6	5.6
2111......	4	7.8
2121......	1	.5
2311......	1	.7
2321......	1	[illegible]
2432......	1	.8
2433......	1	.6
2511......	1	.9
2711......	1	1.3
275.......	1	1.3
2813......	1	.8
2821......	1	.9
2822......	1	1.9
2841......	1	1.0
2871......	1	.5
3241......	1	.5
3431......	1	3.7
3461......	1	.5
3494......	2	1.9
3522......	2	4.5
3535......	1	.5
3564......	1	1.5
3581......	1	.5
3633......	1	3.0
3639......	2	7.8
3711......	1	2.7
Total......	38	53.1
△OWENSBORO		
2085......	1	.6
331*......	1	.5
3671......	1	3.6
Total......	3	4.7
△PADUCAH		
2251......	1	.7
2819......	1	1.7

△Denotes SM potential metropolitan area

SALES MANAGEMENT Announces A New

DIRECTORY OF KEY PLANTS

Accounting for Half of All Value Added In U. S. Manufacturing for All Plants with 500 or More Employees

It will show

- **Plant Name**
- **Location by County**
  Mailing Address
  State
- **SIC Codes**
- **Product description**
- **Average Employment in 1959**

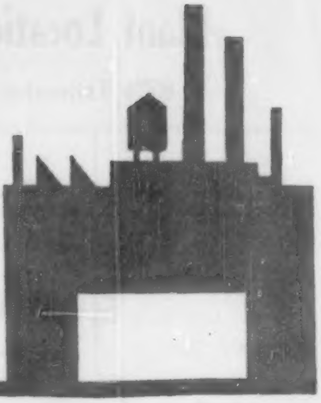
SAMPLE PAGE

County	Plant Name	Address	State	Product	SIC Code Old	SIC Code New	Emp (Th)
Bay	International Paper	Panama City	Fla	Pulp Mills	2611	2611	.8
Bay	International Paper	Panama City	Fla	Paper & Bd	2612	2612	.8
Bradford	Humphreys Gold Corp	Lawtey	Fla	Titanium	3339	3339	.5
Broward	Universal Concrete Pipe	Box 215 Dania	Fla	Pipe	3271	3271	.5
Dade	City Products	Miami	Fla	Ice	2097	2097	.5
Dade	Lawnlite	Box 97 Miami	Fla	Outdr furn	2514	2514	.5
Dade	Adams Engineering Co	Ojus	Fla	mtl furn	2514	2522	.5
Dade	Miami Daily News	Box 410 Miami	Fla	Newspaper	2711	2711	.8
Dade	Miami Herald Publishing Co	Miami	Fla	Newspaper	2711	2711	1.0
Dade	Maule Industries	Box 645 Miami	Fla	sand rock	3272	3271	.9
Dade	Ludman Corp	Box 276 North Miami	Fla	extrusions	3352	3352	.6
Dade	Noma Spray Div Noma Lights	Miami	Fla	sprinklers	3431	3431	.5
Duval	Jno Swisher & Sons	Jacksonville	Fla	Cigars	2121	2121	2.0
Duval	National Container Co	Jacksonville	Fla	Paper & Bd	2612	2612	.6
Duval	St Regis Paper Co	Box 910 Jacksonville	Fla	Paper & Bd	2612	2612	.5

No other directory covers all industries, and reveals employment in each plant, an item which in most directories is handled by code, or as in Census releases is generally blacked out. Yet only if you know how large a plant is can you estimate its potential to you.

In addition to the classification of plants by area shown above, we also show all plants in each 4-digit SIC Industrial category ranked in order of employment.

Here, for example is part of a sample page showing the ranking of plants in the aircraft industry (which incidentally is the industry having the largest plants in the nation.)



SAMPLE PAGE

INDUSTRY 3721-Aircraft

County	Plant Name	Location	State	Emp (Th)
King	Boeing Airplane Co	7755 E Marginal Way Seattle	Wash	40.0
San Diego	Convair Div Gen Dynamics	3165 Pacific Hiwy San Diego	Cal	35.0
Sedgwick	Boeing Aircraft Co	Wichita	Kans	28.5
Los Angeles	Douglas Aircraft	3000 Ocean Pk Santa Monica	Cal	23.5
Los Angeles	Northrop Inc	1001 E Broadway Hawthorne	Cal	22.5
Los Angeles	Douglas Aircraft	Long Beach	Cal	20.0
Tarrant	Convair Div Gen Dynamics	Grants Lane	Tex	20.0
Baltimore	Martin Co	Middle River	Md	19.4

This directory, covering nearly 6,000 plants, was prepared after a year of intensive research by Dr. Jay M. Gould, Managing Director of MARKET STATISTICS, INC. and Research Director of SALES MANAGEMENT, and is being offered at a special prepublication price of $48.00.

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..............Check Enclosed ....Send Invoice

Plant Locations in Metropolitan Areas by SIC Codes

SM Estimates, 1959, for Plants (500 or more employees) and Employment

SIC Code	Plants	Employment (thous.)
PADUCAH (Cont'd)		
3141	1	.8
3662	1	.6
Total	4	3.6
LOUISIANA		
BATON ROUGE		
2812	1	.9
2818	1	1.0
2819	1	1.7
2824	1	.6
2911	1	9.5
Total	5	13.7
LAKE CHARLES		
2819	1	.8
2911	2	2.8
3011	1	.8
Total	4	4.4
MONROE-WEST MONROE		
2611	1	3.1
2819	1	.5
Total	2	3.6
NEW ORLEANS		
2062	2	3.2
2082	2	1.6
2121	1	.5
2211	1	1.5
2311	1	.8
2323	1	.8
2661	1	2.5
2711	1	.8
2819	1	1.0
3211	1	.8
3229	1	.8
3334	1	2.5
3411	2	1.3
3441	1	.8
3731	4	6.3
Total	21	25.2
SHREVEPORT		
3211	1	.9
3443	1	1.2
Total	2	2.1
MAINE		
LEWISTON-AUBURN		
2221	4	6.0
3141	4	2.6
Total	8	8.6
PORTLAND		
2033	2	1.2
2621	1	2.6
3443	2	1.7
Total	5	5.5
BANGOR		
2611	2	1.7
2621	2	1.7
Total	4	3.4
MARYLAND		
BALTIMORE		
2062	1	1.1
2082	2	1.6
2085	1	.9
2211	1	.5
2221	1	.6
2311	2	1.3
2321	1	.6
2392	1	.5
2591	1	1.5
2651	1	.7
2711	2	2.6
2819	2	2.2
2841	1	.7
2911	1	1.5
3021	1	.6
3069	1	1.3
3079	1	1.1
3221	2	1.4
3264	1	1.0
3297	2	1.3
3312	5	33.9
3339	1	.5
3351	1	1.0
3352	2	2.0
3411	2	2.4
3431	1	1.4
3481	1	3.1
3491	1	.9
3542	2	3.5
3551	1	.9
3599	1	2.5
3651	1	5.6
3661	1	3.7
3679	1	1.0
3711	2	4.1
3721	1	19.4
3731	3	11.1
3811	1	.8
Total	54	121.6
△CUMBERLAND		
2621	1	1.9
2824	1	3.0
3011	1	2.2
3211	1	1.0
Total	4	8.1
△HAGERSTOWN		
3559	1	.7
3721	1	6.5
Total	2	7.2
MASSACHUSETTS		
BOSTON		
2051	1	.9
2052	2	1.1
2062	2	1.6
2071	4	4.6
2072	1	1.0
2099	1	.6
2211	2	2.5
2221	1	.5
2231	2	2.9
2261	1	.6
2271	1	.5
2283	1	.5
2297	1	.7
2311	1	.9
2321	1	.7
2329	2	1.4
2335	1	.5
2351	1	.7
2392	1	.6
2396	1	1.0
2499	1	.7
2621	1	.6
2651	2	2.5
2654	1	1.0
2656	1	.7
2711	5	4.9
2731	1	.6
2732	2	1.6
2741	1	.7
2752	1	.8
2771	2	2.2
2799	1	.6
2815	1	.5
2893	1	.7
2899	1	.8
2911	1	.5
3021	3	7.0
3069	6	5.5
3079	1	.7
3111	2	2.3
3141	4	3.7
3142	4	2.0
3172	1	1.8
3281	1	.6
3312	1	.7
3321	1	.8
3357	1	1.0
3421	1	1.9
3429	1	.8
3452	2	2.3
3494	2	1.0
3511	1	15.7
3537	2	1.7
3551	1	.7
3559	4	4.1
3566	1	2.7
3579	1	.6
3581	1	.7
3611	1	.5
3612	1	.6
3613	2	5.5
3621	1	3.3
3622	1	.7
3629	1	1.0
3632	1	1.1
3641	6	5.1
3642	2	1.2
3661	2	3.7
3662	4	11.4
3671	5	7.8
3673	1	.9
3679	3	2.0
3693	1	.6
3714	3	2.8
3722	2	1.8
3729	1	3.7
3731	1	7.6
3821	2	1.4
3822	1	2.2
3831	1	.5
3861	2	1.7
3871	2	1.1
3914	1	.5
3962	1	1.0
3993	1	.6
Total	143	171.4
BROCKTON		
2298	1	.6
3141	3	1.9
Total	4	2.5
FALL RIVER-NEW BEDFORD		
2211	6	6.6
2321	1	.8
2335	2	4.8
2342	1	.5
2391	1	.7
3011	3	5.3
3079	1	.6
3357	1	.8
3423	1	.6
3452	1	.6
3545	1	1.8
3619	2	1.9
3662	2	3.6
3821	1	1.2
3911	1	1.4
3961	3	3.4
Total	28	35.0
PITTSFIELD		
2211	2	2.0
2261	1	.7
2621	2	1.3
2751	1	.6
3612	2	15.5
3679	1	1.0
Total	9	21.1
SPRINGFIELD-HOLYOKE		
2061	1	.7
2211	1	.7
2221	1	.5
2262	1	.5
2299	1	.6
2341	2	1.7
2643	5	3.3
2711	1	.7
2782	1	1.0
2821	2	3.9
2841	1	.7
3011	1	3.0
3079	3	2.8
3315	1	1.1
3494	1	2.2
3511	1	2.5
3548	1	.5
3565	1	1.0
3566	2	1.3
3585	2	1.8
3588	1	1.0
3612	1	.5
3679	1	2.0
3694	1	.5
3715	1	.7
3721	1	.7
3751	1	.9
3941	1	.6
3949	1	2.2
3993	1	.7
Total	40	40.3
WORCESTER		
2211	1	.6
2231	2	1.2
2269	1	.7
2321	1	.6
2399	1	.7
2611	1	1.1
2621	1	1.2
2711	1	.7
2732	1	.7
3079	2	1.5
3141	2	1.5
3291	2	2.3
3312	1	1.3
3315	1	1.0
3321	1	.5
3391	1	1.8
3399	1	.5
3425	1	1.2
3429	1	1.0
3452	1	.8
3511	1	1.0
3541	2	3.0
3542	1	.7
3545	2	1.8
3582	3	3.8
3621	1	.6
3651	1	.5
3729	1	.6
3732	1	.7
3851	1	4.0
3871	1	1.0
3941	1	.7
Total	40	39.2
MICHIGAN		
ANN ARBOR		
3545	1	.5
3662	1	.9
3621	1	2.9
3711	1	5.0
3714	1	7.1
3721	1	2.7
3821	1	1.7
3861	1	1.1
Total	8	21.9
BAY CITY		
3399	1	.6
3531	2	1.9
3612	1	.8
3711	1	2.2
3714	1	1.4
3731	1	.5
Total	7	7.4
DETROIT		
2011	1	1.0
2024	1	1.2
2026	2	2.0
2051	6	4.5
2082	3	1.8
2086	1	.7
2121	1	2.0
2514	1	.7
2645	2	1.4
2711	3	2.1
2812	2	5.2
2819	1	.6
2821	1	.7
2834	2	2.5
2842	2	1.0
2851	4	2.6
2911	1	1.4
3011	1	6.9
3069	2	1.6
3211	2	1.9
3241	1	1.7
3263	1	.7
3293	1	1.4
3312	12	30.7
3317	3	2.8
3321	3	8.8
3351	3	2.5
3361	1	.6

△Denotes SM potential metropolitan area

THESE COMPANIES, *taken from the Printer's Ink list of 100 leading business publication advertisers, are also consistent advertisers in W. R. C. Smith Publishing Company regional magazines.*

- General Electric
- U.S. Steel
- General Motors
- Allis-Chalmers
- Du Pont
- Allied Chemical
- Westinghouse Electric
- Union Carbide
- Republic Steel
- Colorado Fuel & Iron
- Bethlehem Steel
- Dow Chemical
- Armco Steel
- International Harvester
- Minnesota Mining
- Aluminum Co.
- Anaconda
- American Chain & Cable
- Koppers
- Monsanto Chemical
- Reynolds Metals
- Johns-Manville
- Chrysler
- Wagner Electric
- Texaco Inc.
- Porter, H. K.
- Yale & Towne
- Federal-Mogul Bearings
- Yuba Consolidated Inds.
- Electric Auto-Lite
- Ampex Corp.
- Allen-Bradley
- Koehring Co.

HUNDREDS OF OTHER *leading national advertisers also use Smith publications. Their use of this space is a positive endorsement of the principles of selectivity and of concentration of effort which are characteristics of regional advertising.*

the advantages of regional advertising

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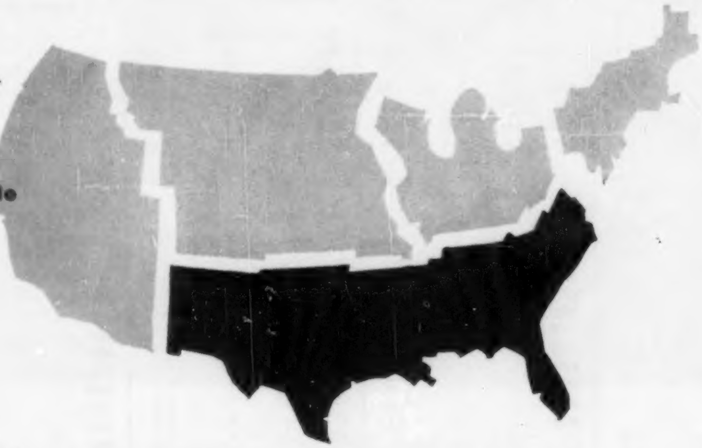

GREATER MARKETING FLEXIBILITY and more intensive readership are two advantages gained by advertising in regional publications. Because editorial concentration in these publications is on the interests, problems and personalities of the region where sales impact is needed. More than 1,200 leading advertisers successfully using the W.R.C. Smith publications indicate complete acceptance of these facts in major market strategies. The Smith business magazines listed below have over 125,000 readers monthly. In their fields no other publications approach them in intensity of coverage and readership. Let their strength help you sell the nation's fastest growing market, where rapid industrial expansion and prospering agriculture have resulted in new and increased demands for goods of all kinds.

W.R.C. Smith Publications

Serving the South and Southwest

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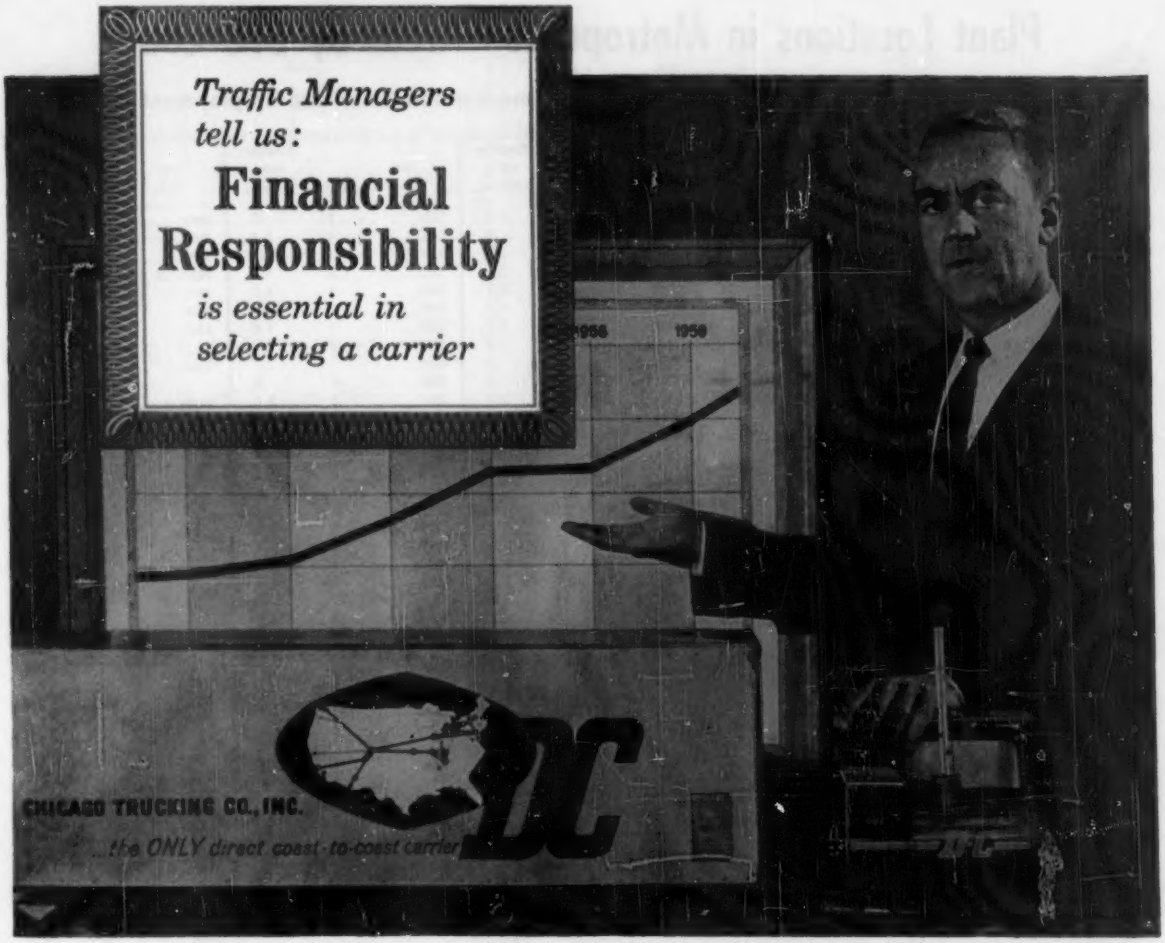
Southern Automotive Journal
Southern Building Supplies
Southern Farm Equipment
Southern Hardware
Southern Power & Industry

Plant Locations in Metropolitan Areas by SIC Codes

SM Estimates, 1959, for Plants (500 or more employees) and Employment

SIC Code	Plants	Employment (thous.)
DETROIT (Cont'd)		
3362	1	.7
3391	3	2.3
3429	1	.5
3431	1	.8
3432	1	.5
3433	2	3.2
3441	2	3.0
3442	3	3.7
3452	4	2.4
3461	7	12.1
3481	3	1.7
3493	1	.9
3494	1	.7
3519	4	10.6
3522	2	2.8
3531	1	.6
3536	1	1.2
3541	2	1.5
3544	4	2.3
3545	2	2.6
3561	2	1.9
3562	2	4.3
3564	1	1.3
3566	3	3.3
3571	3	6.9
3599	1	2.5
3622	2	2.2
3699	1	1.5
3711	18	122.9
3712	1	.7
3714	43	87.1
3715	3	14.1
3722	3	3.2
3729	4	12.8
3731	1	9.0
3742	1	.8
3822	1	1.0
Total	280	419.8
FLINT		
3429	1	7.4
3711	1	2.3
3714	8	84.8
Total	10	94.5
GRAND RAPIDS		
2052	1	.6
2622	1	1.0
2631	1	1.0
2661	1	1.0
3069	1	.6
3141	1	1.3
3429	4	3.7
3431	1	.6
3461	1	1.2
3481	1	1.6
3544	1	.6
3671	1	1.0
3631	1	2.5
3632	1	3.2
3681	1	.7
3712	1	2.5
3714	1	3.1
3829	1	.6
3811	1	3.8
Total	22	32.5
JACKSON		
2011	1	1.5
3429	1	.6
3461	1	1.0
3585	1	.5
3662	1	.5
3714	8	4.9
3729	1	.9
Total	11	9.9
KALAMAZOO		
2031	1	.8
2621	1	1.1
2641	1	.6
2649	1	2.1
2652	1	2.7
2834	1	2.8
3561	1	.8
3699	1	.5
3711	1	.8
3714	1	.9
3729	1	.8
3949	1	.5
Total	12	14.4
LANSING		
3391	1	1.0
3433	1	1.3
3522	1	.8
3562	1	.5
3711	4	25.9
Total	8	29.3
MUSKEGON-MUSKEGON HEIGHTS		
2622	1	1.2
2649	1	.9
3312	1	.6
3321	2	3.7
3399	1	.5
3519	2	8.0
3536	1	1.0
3632	1	1.6
3714	2	2.0
3949	1	2.4
Total	13	21.8
SAGINAW		
2011	1	.7
3299	1	1.9
3321	1	6.0
3322	1	3.0
3546	1	.9
3561	1	1.2
3714	4	9.5
Total	10	23.2
△BATTLE CREEK		
2043	3	5.1
2652	2	1.5
3229	1	1.3
3322	1	.6
3461	2	1.3
3522	1	1.2
3537	1	1.9
3714	1	.9
3729	2	2.2
Total	14	16.2
△BENTON HARBOR-ST. JOSEPH		
2649	1	.5
3315	1	.6
3323	1	.9
3423	1	.5
3442	1	1.8
3537	1	1.3
3539	1	.9
3633	1	1.3
3651	1	.9
3662	1	.9
3679	1	.6
3714	4	4.8
Total	15	14.7
△PORT HURON		
2699	1	1.1
3315	1	.8
3494	1	3.4
3732	1	.8
Total	4	6.1
MINNESOTA		
DULUTH-SUPERIOR		
2033	1	.5
2099	1	.5
2321	2	1.0
3312	1	.6
3315	1	3.0
3661	1	1.0
Total	7	6.5
MINNEAPOLIS-ST. PAUL		
2011	2	7.3
2041	2	5.0
2042	3	4.1
2082	2	2.2
2254	1	1.0
2431	1	1.2
2499	1	.5
2621	1	2.0
2641	1	8.7
2661	1	1.3
2711	2	2.7
2731	1	1.4
2751	2	5.9
2819	1	2.0
2821	1	.7
2842	1	1.8
2844	2	1.6
2992	1	.8
3411	1	.8
3449	1	.5
3519	2	2.0
3522	2	8.8
3531	3	3.2
3571	1	4.5
3585	1	1.2
3613	1	.5
3621	2	1.6
3632	1	1.4
3662	1	.8
3711	1	1.9
3714	1	.6
3729	1	.6
3811	1	4.5
3821	1	4.5
3993	1	.8
Total	48	81.2
△ROCHESTER		
3571	1	2.0
Total	1	2.0
△ST. CLOUD		
3632	1	2.0
Total	1	2.0
MISSISSIPPI		
JACKSON		
2351	1	.6
2511	1	1.6
3221	1	.7
3461	1	.6
3630	1	.6
3729	1	.8
Total	6	5.0
△BILOXI-GULFPORT		
2321	1	1.0
Total	1	1.0
△GREENVILLE		
2271	1	.9
Total	1	.9
△MERIDIAN		
2432	1	.5
Total	1	.5
MISSOURI		
KANSAS CITY		
2011	3	6.1
2051	1	.5
2052	1	.8
2328	1	1.0
2335	1	1.2
2653	1	.5
2711	1	.8
2771	1	.9
2841	2	1.6
2851	2	1.1
2892	1	1.0
2911	2	1.6
3297	1	1.0
3312	1	3.8
3357	1	.8
3441	3	2.0
3443	1	.6
3444	1	.6
3519	1	.5
3522	1	1.0
3561	1	.8
3632	1	.7
3679	1	4.2
3711	3	4.5
3714	2	12.8
3715	1	.9
3721	1	1.5
3722	1	4.2
3729	2	1.7
Total	40	58.8
ST. JOSEPH		
2011	2	3.4
2043	1	.8
2649	1	1.0
3699	1	1.0
Total	5	6.2
ST. LOUIS		
2011	6	9.8
2023	1	.5
2024	1	.5
2025	1	.5
2046	1	.6
2082	4	6.2
2131	1	.6
2221	1	1.0
2311	2	1.2
2338	2	1.2
2366	1	.6
2514	1	.5
2621	1	1.2
2651	1	.5
2711	2	1.6
2731	1	.5
2815	1	.5
2816	1	1.5
2819	2	4.5
2833	1	2.0
2834	1	.6
2892	1	1.0
2911	3	5.7
3131	1	.5
3141	6	4.5
3172	1	.5
3211	1	.9
3221	2	4.9
3241	1	.5
3312	3	8.1
3323	3	5.2
3339	1	.9
3341	1	1.2
3399	1	1.8
3357	1	.7
3411	2	1.7
3442	1	.7
3443	3	3.1
3499	1	.
3519	1	.6
3579	1	.8
3585	1	1.1
3599	1	.7
3581	1	.8
3589	1	.7
3612	1	2.5
3621	4	4.6
3622	3	2.5
3632	1	2.5
3639	1	.6
3711	5	13.5
3714	2	2.7
3721	2	20.5
3729	2	2.8
3731	1	.7
3742	2	3.0
3821	2	3.0
3949	1	.6
Total	99	142.7
SPRINGFIELD		
2022	1	.6
2654	1	1.0
2721	1	.5
3672	1	1.3
3715	1	.6
Total	5	4.1
△JOPLIN		
2871	1	1.0
2992	1	.7
3722	1	.7
3829	1	1.4
Total	4	3.8

△Denotes SM potential metropolitan area



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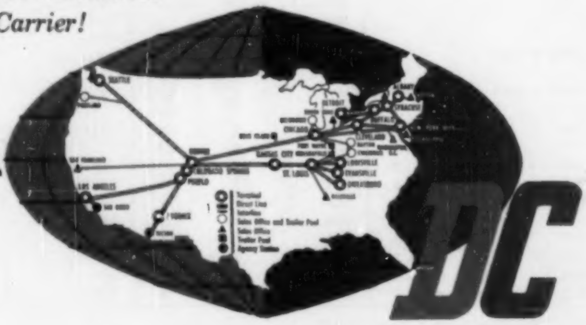


Plant Locations in Metropolitan Areas by SIC Codes

SM Estimates, 1959, for Plants (500 or more employees) and Employment

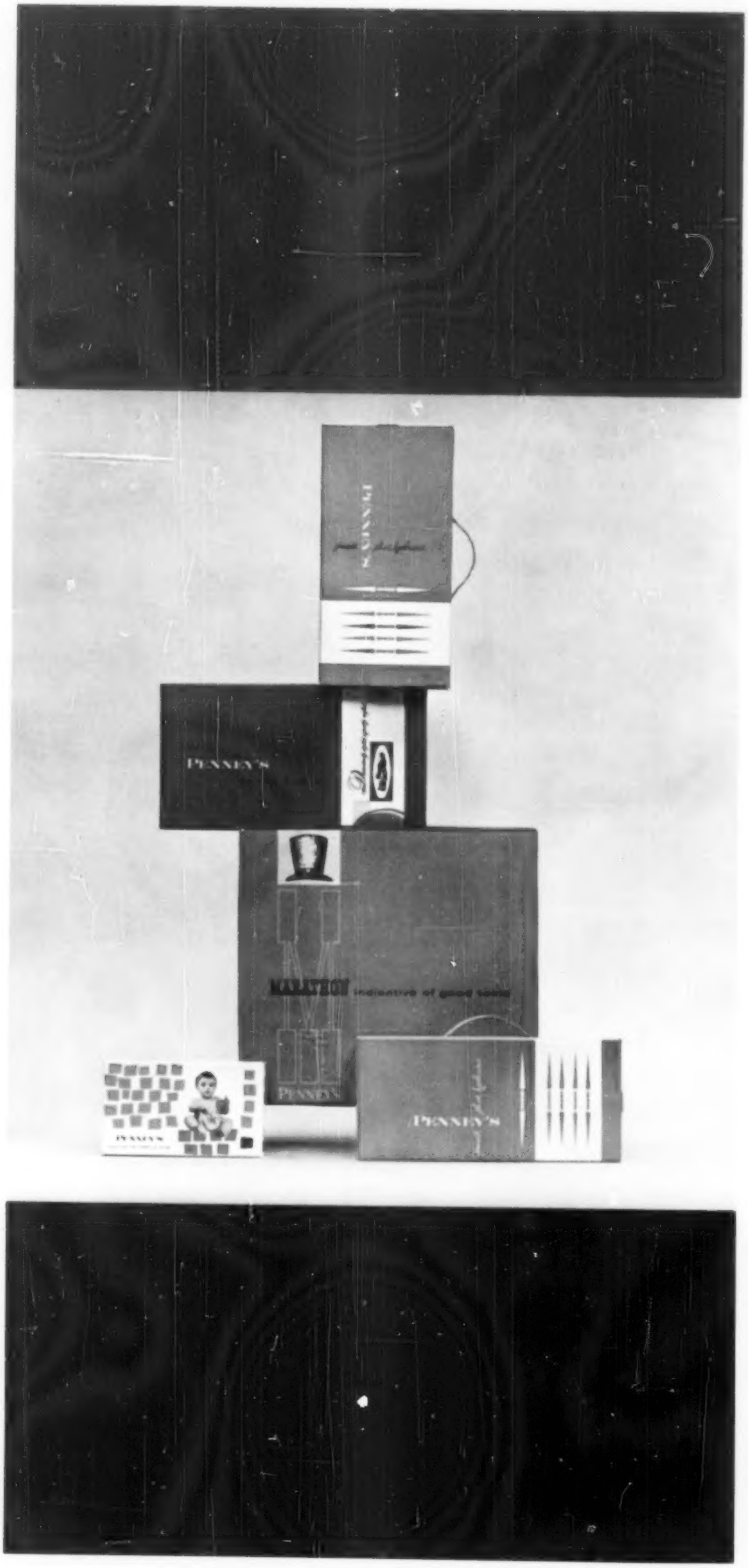
SIC Code	Plants	Employment (thous.)
MONTANA		
△GREAT FALLS		
3333	1	1.7
Total	1	1.7
△BUTTE-ANACONDA		
3331	1	3.9
3333	1	2.0
Total	2	5.9
NEBRASKA		
LINCOLN		
3069	1	.8
3751	1	.5
3871	1	2.2
Total	3	3.5
OMAHA		
2011	5	11.4
2051	1	.7
2052	1	.5
2099	1	.8
2711	1	.5
3441	1	.8
3511	1	.8
3661	1	.5
3679	1	.5
Total	13	16.5
NEVADA		
△LAS VEGAS		
3339	1	.5
Total	1	.5
NEW HAMPSHIRE		
MANCHESTER		
2211	2	1.8
2256	1	.5
2641	1	1.4
2771	1	.5
3141	7	6.9
3564	2	1.5
3562	1	.7
3679	2	1.5
3941	1	.5
Total	18	15.3
NEW JERSEY		
JERSEY CITY		
2071	1	.7
2099	4	3.7
2111	1	.9
2342	1	1.5
2649	1	.5
2751	3	2.2
2821	1	.8
2841	1	4.0
2911	2	4.2
2951	1	1.0
3221	1	.5
3293	1	.8
3312	2	1.9
3315	1	.5
3356	1	.8
3411	1	2.4
3429	1	1.0
3432	1	.6
3433	1	.6
3534	1	1.4
3561	1	2.5
3562	1	1.9
3589	1	1.0
3591	1	.5
3621	1	.7
3631	1	.6
3642	2	1.1
3661	3	9.5
3691	2	17.7
3731	2	1.8
3861	1	.5
3911	1	.6
3951	1	.5
3982	1	.7
Total	48	80.6
NEWARK		
2051	3	2.0
2052	1	.8
2071	1	.5
2082	4	4.1
2086	1	1.8
2261	1	.7
2271	2	1.3
2295	1	.8
2321	1	.7
2515	1	1.6
2649	1	.8
2711	2	1.6
2732	1	.6
2815	1	1.7
2818	1	.6
2819	1	.7
2821	1	.6
2833	1	2.4
2834	5	4.8
2844	1	.6
2892	1	6.0
2911	1	3.4
3069	1	1.2
3315	1	.6
3351	1	.5
3357	1	.6
3361	1	.7
3411	1	.9
3421	1	.5
3482	1	1.2
3542	2	1.3
3549	1	1.3
3555	1	1.1
3559	1	1.0
3561	1	.5
3562	1	1.4
3571	1	1.1
3579	1	.9
3581	1	.6
3585	1	1.0
3611	1	2.0
3612	1	1.4
3613	2	4.1
3621	1	.8
3622	1	.5
3636	1	7.6
3639	1	.5
3641	2	1.6
3643	2	1.8
3651	2	2.1
3671	1	.5
3673	1	1.5
3679	1	.8
3681	1	3.0
3694	3	3.1
3711	4	8.7
3714	1	1.4
3722	2	2.5
3811	1	1.2
3821	1	.5
3861	1	.5
3941	2	2.8
3964	1	1.0
3999	2	2.8
Total	98	107.2
PATERSON-CLIFTON-PASSAIC		
2052	2	1.2
2096	1	.8
2231	3	3.4
2261	3	2.2
2271	1	.6
2321	1	.7
2844	1	.8
2892	1	.9
2952	1	1.0
3069	3	4.9
3352	1	.5
3357	1	1.1
3399	1	.5
3411	1	1.0
3429	1	.5
3566	1	.5
3621	1	.6
3629	1	.5
3651	3	6.8
3673	1	.7
3714	1	3.3
3722	1	1.8
3723	2	1.1
3742	1	.8
3811	2	4.6
3841	1	2.0
3964	1	.8
Total	38	43.6
TRENTON		
2121	1	.7
2329	1	.5
2641	1	1.2
3069	1	.7
3079	1	.8
3261	2	1.0
3262	1	.5
3292	1	1.5
3315	2	1.4
3429	1	5.3
3433	1	.5
3441	1	.7
3481	1	.6
3561	1	2.0
3565	2	1.3
3641	1	.8
3643	2	1.0
3942	1	.7
3982	1	.7
Total	23	22.4
△NEW BRUNSWICK-PERTH AMBOY		
2522	1	.8
2641	1	.5
2751	1	1.7
2815	1	3.7
2816	1	1.8
2818	1	1.8
2821	1	.8
2834	1	2.3
2892	1	1.9
2911	1	1.4
3292	2	4.6
3331	3	4.6
3357	1	1.8
3441	1	.6
3443	1	.7
3549	1	.6
3564	1	2.2
3599	1	.8
3629	1	.5
3671	1	1.8
3679	3	4.3
3691	1	.6
3711	1	1.7
3941	2	3.8
3942	1	.8
3961	1	1.2
3999	1	1.6
Total	33	48.7
△VINELAND-BRIDGETON		
2037	1	2.2
2211	1	.7
3221	4	5.0
3229	1	2.0
Total	7	9.9
NEW MEXICO		
ALBUQUERQUE		
2519	1	.6
3541	1	2.0
Total	2	2.6
NEW YORK		
ALBANY-SCHENECTADY-TROY		
2011	1	1.0
2061	1	.6
2231	1	1.3
2256	1	.7
2271	1	1.5
2321	1	2.8
2329	2	1.9
2621	2	2.6
2666	1	.8
2751	2	2.3
2815	1	.9
2821	1	.8
2834	1	1.3
3264	1	.6
3291	1	2.3
3299	1	.9
3312	1	1.6
3511	1	7.0
3519	1	.9
3621	2	4.0
3644	1	1.0
3673	1	4.0
3714	1	.9
3741	1	2.4
3981	1	.6
Total	29	44.5
BINGHAMTON		
2023	1	.6
2512	1	.8
2645	1	.7
3141	6	6.4
3357	1	.8
3571	1	9.3
3729	1	2.3
3861	2	4.5
Total	14	24.4
BUFFALO		
2011	1	.7
2041	2	1.8
2043	1	.6
2045	1	.5
2071	1	.5
2311	1	1.0
2622	1	.9
2621	1	.8
2631	1	1.7
2658	1	.8
2711	2	1.6
2761	1	.6
2761	2	2.1
2813	1	2.0
2815	1	2.1
2818	2	2.5
2819	2	3.8
2821	3	3.5
2823	1	1.6
2911	1	.5
3011	2	3.6
3031	1	.5
3079	1	.5
3275	1	1.8
3291	2	3.4
3312	6	22.9
3313	2	4.4
3315	1	1.7
3323	2	2.3
3361	1	1.5
3391	1	1.7
3433	3	2.4
3482	1	1.0
3549	1	.7
3551	1	1.5
3561	1	2.0
3564	1	1.4
3569	2	2.5
3585	1	1.4
3621	1	7.0
3624	1	1.5
3634	1	.9
3651	1	.6
3661	1	2.0
3679	3	3.6
3691	1	.5
3714	8	27.0
3721	2	2.0
3722	5	7.0
3629	2	5.5
3831	1	1.5
Total	85	145.9
NEW YORK		
2011	1	.9
2013	1	1.1
2051	11	10.2
2052	2	4.3
2062	3	3.3
2071	6	5.4
2072	1	.8
2073	2	1.9
2082	5	9.4
2085	1	.5
2086	1	.7

△Denotes SM potential metropolitan area

EXAMPLE OF GARDNER PERSUASIVE PACKAGING

Whenever you see a J. C. Penney store, you'll see Gardner Persuasive Packaging on the job. Chances are, it'll be **Redi-Tote,** the best thing that's happened to shoe boxes, or the new **Redi-Topper** (a hat box, what else?) Both are perfect examples of Gardner's all-round packaging ingenuity. We invented 'em. ¶ Actually, J. C. Penney was the first major retailer to see the merits of, and demand **Redi-Tote.** So recently, when one of our Sales Representatives suggested adapting the **Redi-Tote** principle for packaging other products, we took the idea to Penney. They liked it. **Redi-Topper** is the result. ¶ Penney supplied the appealing graphic design. Gardner **Structural Design** made structural modifications, including an easier opening, better-holding locking top. Gardner Machine Application specialists journeyed to the factories of the firms who supply Penney with men's hats to insure efficient and economical handling of the new **Redi-Topper** on their machines. ¶ Another example of Gardner's creative concept of total packaging service—Persuasive Packaging. Got a new packaging program coming up? We'd like to show you what we can do.

DIAMOND NATIONAL
THE GARDNER DIVISION
MIDDLETOWN, OHIO

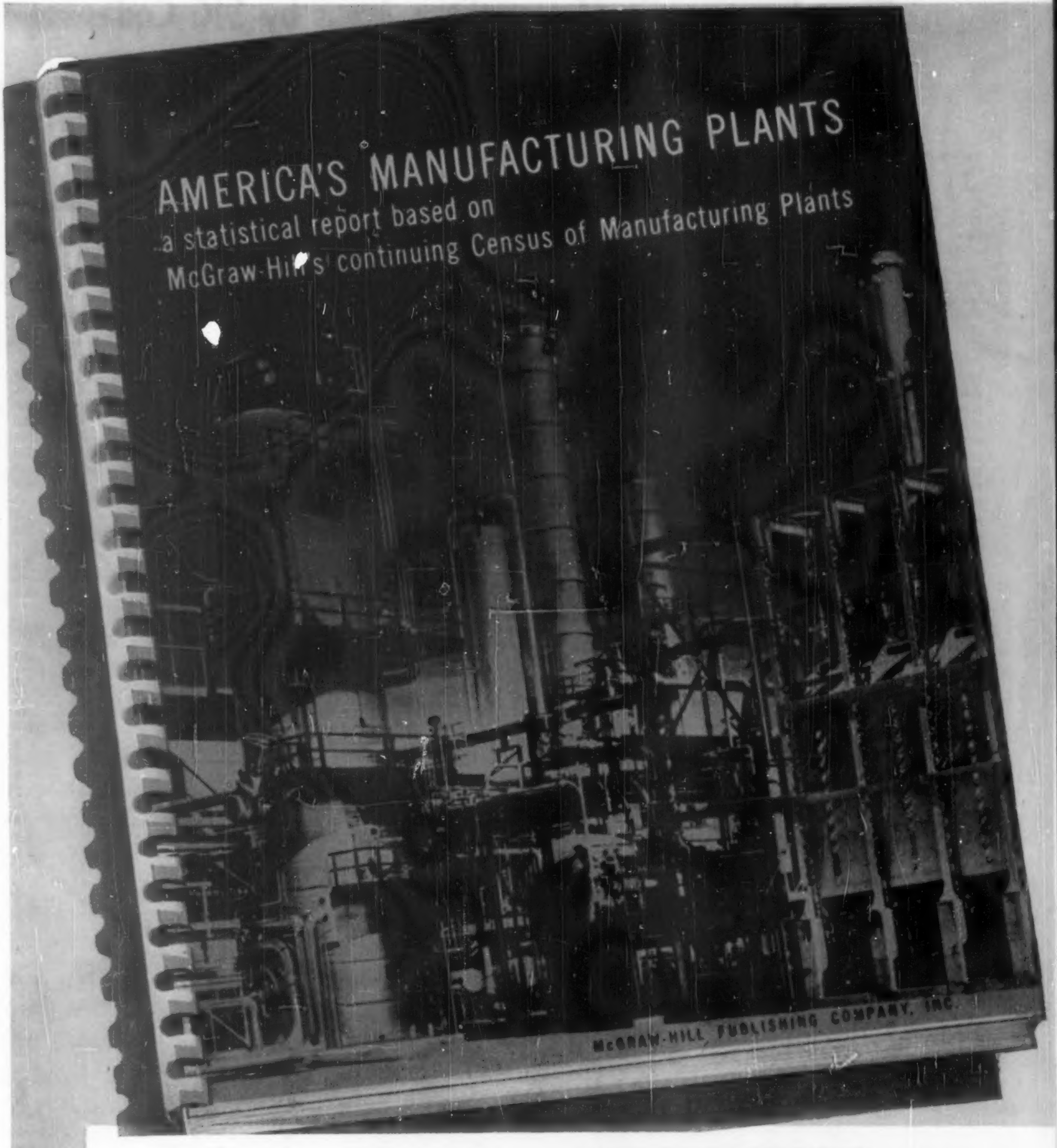


Plant Locations in Metropolitan Areas by SIC Codes

SM Estimates, 1959, for Plants (500 or more employees) and Employment

SIC Code	Plants	Employment (thous.)
NEW YORK (Cont'd)		
2094......	1	.6
2099......	4	2.4
2211......	1	.5
2251......	1	.7
2311......	10	8.3
2335......	1	.5
2342......	1	.5
2599......	1	.5
2649......	1	1.9
2691......	2	1.7
2711......	11	21.2
2721......	11	12.8
2731......	4	2.8
2732......	2	1.5
2741......	1	1.0
2752......	2	1.2
2753......	1	1.2
2761......	1	.5
2771......	3	3.2
2782......	1	.6
2789......	2	1.0
2818......	1	3.8
2821......	1	.7
2834......	3	6.5
2841......	1	1.4
2844......	5	3.0
2911......	1	.6
3069......	1	1.0
3079......	2	2.2
3141......	1	1.0
3291......	1	.6
3331......	1	1.3
3361......	2	2.6
3392......	1	.5
3399......	1	.6
3411......	3	2.7
3433......	1	.8
3442......	1	1.1
3452......	3	2.1
3461......	1	.6
3491......	1	.5
3497......	1	.5
3511......	1	.5
3534......	2	2.6
3554......	1	.5
3566......	4	5.0
3576......	1	.5
3581......	2	2.5
3611......	2	1.1
3613......	1	.7
3619......	1	2.2
3621......	1	.7
3622......	1	1.6
3639......	1	1.2
3653......	5	4.5
3661......	2	1.0
3662......	5	4.0
3671......	2	2.0
3679......	2	1.4
3711......	2	5.0
3721......	5	33.3
3722......	1	1.0
3729......	3	3.6
3731......	4	6.9
3811......	10	29.6
3821......	1	1.3
3831......	1	.5
3843......	1	1.0
3861......	3	3.7
3871......	1	3.0
3942......	1	.6
3952......	1	.8
3955......	1	.5
3964......	1	.6
3981......	1	.6
3982......	1	.9
Total......	201	266.6
ROCHESTER		
2011......	1	1.9
2033......	4	3.3
2071......	1	1.1
2082......	1	.6
2311......	5	6.9
2387......	1	1.1
2522......	1	.5
2711......	1	.5
2731......	1	.6
2751......	1	.9
3411......	1	.6
3541......	2	3.6
3569......	1	.7
3571......	1	1.0
3582......	1	.9
3621......	2	4.8
3661......	1	4.5
3673......	1	1.7
3679......	2	4.0
3714......	1	4.2
3723......	1	.5
3742......	1	1.3
3821......	1	2.3
3831......	2	1.9
3843......	1	1.2
3851......	3	8.0
3861......	5	27.0
3911......	1	.5
3931......	1	.6
Total......	46	96.6
SYRACUSE		
2086......	1	.6
2311......	1	.7
2812......	1	2.3
2833......	1	1.1
3262......	1	1.6
3312......	1	3.1
3361......	1	.9
3542......	2	1.0
3562......	1	.6
3572......	1	4.3
3582......	1	1.3
3586......	1	9.2
3619......	1	2.3
3633......	1	1.1
3643......	1	.6
3671......	1	.7
3679......	2	11.0
3694......	1	1.2
3711......	1	.9
3713......	1	.8
3714......	1	1.5
3722......	1	3.1
3914......	1	2.6
Total......	26	66.8
UTICA-ROME		
2253......	1	.9
2254......	1	.9
2824......	1	.8
3141......	2	1.3
3142......	2	1.1
3315......	1	1.6
3351......	1	2.5
3357......	1	1.0
3421......	1	.5
3461......	3	2.8
3499......	1	.8
3531......	1	2.8
3542......	1	2.0
3551......	1	.8
3571......	1	2.5
3679......	3	3.0
3722......	4	5.6
3914......	1	3.6
3949......	1	.5
Total......	28	34.1
△AUBURN		
2298......	1	1.0
3079......	1	.8
3121......	1	1.1
3519......	1	1.4
3662......	1	.8
Total......	5	5.1
△ELMIRA		
3221......	1	1.4
3441......	1	.7
3494......	1	.6
3572......	1	6.2
3679......	1	1.3
3714......	2	2.2
Total......	7	12.4
△JAMESTOWN		
2283......	1	.9
2522......	1	1.6
3312......	1	2.1
3423......	1	.6
3443......	1	1.3
3536......	1	.7
3662......	1	1.6
3729......	1	1.0
Total......	8	9.8
△NEWBURGH		
2271......	1	.6
2295......	1	1.0
Total......	2	1.6
△POUGHKEEPSIE		
2653......	1	.5
2761......	1	1.9
3622......	1	1.4
3562......	1	.9
3571......	1	9.3
3661......	1	.5
Total......	6	14.5
△WATERTOWN		
2621......	1	1.9
3554......	1	.7
3729......	1	3.0
Total......	3	5.6
NORTH CAROLINA		
ASHEVILLE		
2211......	2	1.3
2261......	1	.7
2271......	1	2.1
2824......	1	4.0
3161......	1	1.6
3729......	1	.5
Total......	7	10.2
CHARLOTTE		
2052......	1	.7
2211......	1	1.2
2251......	2	1.4
3321......	1	.7
3729......	1	1.8
Total......	6	5.8
DURHAM		
2111......	2	5.0
2141......	2	1.4
2211......	1	.7
3611......	1	.6
Total......	6	7.7
GREENSBORO-HIGH POINT		
2111......	1	3.0
2211......	4	4.9
2251......	3	2.0
2252......	5	3.3
2261......	1	.7
2328......	2	1.5
2329......	1	.7
2541......	1	.7
2369......	1	.7
2392......	1	.8
3661......	1	2.5
Total......	21	20.9
RALEIGH		
2261......	1	.6
3611......	1	1.2
Total......	2	1.8
WINSTON-SALEM		
2111......	1	7.4
2131......	1	.7
2252......	2	4.0
2254......	1	.7
2281......	1	.7
3611......	1	7.5
Total......	7	21.0
△BURLINGTON		
2211......	2	1.7
2221......	1	1.4
2231......	1	.6
2251......	3	2.4
3721......	1	3.5
Total......	8	9.6
△FAYETTEVILLE		
2221......	1	.8
2432......	1	.6
Total......	2	1.3
△GASTONIA		
2211......	3	2.2
2281......	7	4.9
Total......	10	7.1
△ROCKY MOUNT		
2141......	1	.5
2211......	2	1.6
2261......	1	.7
Total......	4	2.8
△WILMINGTON		
3443......	1	1.8
Total......	1	1.8
NORTH DAKOTA		
△GRAND FORKS-EAST GRAND FORKS		
2063......	1	.6
Total......	1	.6
OHIO		
AKRON		
2043......	1	.8
2711......	1	.6
2812......	1	2.0
3011......	6	42.3
3031......	1	.5
3069......	3	1.9
3264......	1	.5
3443......	1	5.0
3461......	1	.7
3494......	1	.6
3559......	1	.6
3644......	1	.7
3729......	1	9.2
Total......	20	65.2
CANTON		
2011......	1	.6
2051......	1	.5
2542......	1	1.4
3069......	1	.6
3251......	1	.7
3312......	4	9.9
3316......	1	.5
3317......	1	.5
3323......	1	.8
3391......	3	2.7
3441......	1	.9
3351......	1	.6
3482......	1	1.3
3519......	1	1.3
3535......	1	.8
3542......	1	1.0
3582......	2	8.4
3569......	1	1.1
3621......	1	1.5
3635......	1	2.0
Total......	26	36.8
CINCINNATI		
2011......	1	1.0
2026......	1	.5
2051......	1	.6
2052......	1	.9
2082......	1	.6
2085......	1	1.3
2086......	1	.6
2099......	1	1.5
2311......	3	1.6
2321......	1	.6
2335......	1	.5
2615......	1	.9
2522......	1	.9
2591......	1	1.0
2653......	1	.5
2711......	2	1.9
2741......	1	1.6
2751......	2	1.5
2782......	1	.6
2815......	1	.8
2818......	1	.6
2834......	1	.8
2841......	1	6.7

△Denotes SM potential metropolitan area



This 50" x 37" multi-color wall map, printed on heavy stock and tubed, shows the concentration of manufacturing plants with 100 or more employees in the U. S.

Statistics are given in each of 437 SIC industries for manufacturing plants employing 20 or more, 50 or more, and 100 or more workers.

Plant Locations in Metropolitan Areas by SIC Codes

SM Estimates, 1959, for Plants (500 or more employees) and Employment

SIC Code	Plants	Employment (thous.)
CINCINNATI (Cont'd)		
2844	1	.5
2882	1	1.2
3079	1	1.9
3253	1	.6
3312	1	1.7
3339	1	2.5
3361	1	.9
3411	1	.6
3431	1	1.3
3433	1	.6
3442	1	.6
3461	2	1.2
3494	2	1.6
3541	3	5.7
3542	2	1.0
3564	1	.5
3566	1	.6
3582	1	.6
3613	1	.8
3621	1	1.6
3634	1	1.2
3671	1	1.0
3679	2	3.9
3711	1	1.8
3712	1	2.3
3714	1	6.0
3716	1	1.4
3722	4	14.1
3831	1	2.6
3949	1	1.2
Total	66	89.8
CLEVELAND		
2011	1	.9
2026	1	.6
2082	1	1.2
2253	1	.6
2281	1	2.3
2311	2	5.5
2339	1	.6
2515	1	.5
2542	1	1.1
2643	2	1.7
2711	2	3.2
2721	1	.6
2731	1	.5
2771	1	2.1
2812	1	3.0
2818	1	.5
2823	1	1.3
2851	2	1.0
2873	1	.8
2911	1	1.1
3069	1	1.4
3312	6	16.4
3315	2	1.6
3317	1	.6
3321	2	1.1
3322	1	1.2
3351	1	2.1
3361	3	3.4
3391	1	.9
3399	1	.5
3429	2	1.0
3433	1	.6
3451	1	.8
3452	4	5.0
3461	2	5.0
3481	2	1.0
3494	1	1.0
3519	2	1.7
3522	1	.8
3531	4	4.3
3535	2	2.5
3536	3	1.7
3541	1	1.4
3542	1	.6
3545	2	1.0
3555	1	.7
3559	3	1.7
3561	1	.6
3579	1	2.8
3599	1	1.2
3611	1	.5
3621	3	2.1
3622	2	1.4
3623	1	1.2
3624	1	.9
3631	1	.6
3636	1	.5
3641	2	1.2
3642	1	.5
3679	1	.6
3691	1	.9
3692	1	.6
3711	1	7.1
3714	15	33.2
3722	2	2.7
3729	4	10.9
3741	1	.6
3821	1	1.8
Total	119	180.0
COLUMBUS		
2026	1	.6
2051	1	.5
2082	1	.6
2296	1	1.3
2649	1	.6
2711	1	1.0
2821	1	.6
3141	1	.8
3229	2	2.3
3322	1	5.0
3323	1	.9
3429	1	4.7
3433	2	1.0
3452	1	.6
3461	1	.6
3531	2	2.8
3542	1	.6
3562	1	2.1
3585	1	.7
3632	1	3.8
3679	1	.6
3721	1	10.6
3821	1	.9
Total	26	42.6
DAYTON		
2052	1	.7
2231	1	.6
2642	1	.6
2711	1	.9
2751	2	4.0
2761	1	1.7
3011	1	2.2
3069	2	1.0
3241	1	.5
3321	2	1.6
3545	1	.8
3551	1	1.4
3556	1	.5
3561	1	.6
3564	1	.6
3571	1	14.6
3579	1	.5
3621	5	4.6
3632	1	13.4
3694	1	5.9
3714	2	8.2
3723	1	1.6
Total	30	65.9
HAMILTON-MIDDLETOWN		
2621	3	5.7
2641	1	.7
3312	1	8.0
3482	2	1.6
3542	1	2.0
3631	1	.7
3714	1	4.5
3729	2	2.9
Total	12	26.1
LIMA		
2911	1	.5
3323	1	.6
3519	1	1.4
3531	1	1.3
3621	1	2.2
3722	1	1.1
3791	1	1.0
Total	7	8.1
LORAIN-ELYRIA		
2821	1	.9
3291	1	.6
3312	1	8.8
3423	1	.7
3451	1	.6
3531	1	1.6
3621	1	1.2
3714	3	4.6
3715	1	.9
3729	1	.5
3731	1	.7
Total	13	20.9
SPRINGFIELD		
2721	1	2.7
3323	1	.6
3519	1	.5
3621	1	1.4
3713	1	3.6
3729	1	.7
Total	6	9.5
STEUBENVILLE-WEIRTON		
3263	3	4.6
3312	8	24.7
3366	1	.7
Total	12	30.0
TOLEDO		
2099	1	.6
2296	1	.6
2711	2	1.5
2899	2	1.6
3229	1	1.5
3231	1	3.4
3312	1	.7
3323	1	.7
3361	1	.6
3369	1	3.0
3429	1	.7
3461	4	2.4
3533	1	1.2
3542	1	.6
3561	1	1.0
3566	1	.5
3567	1	.6
3576	1	1.0
3694	2	4.3
3711	1	6.5
3714	2	3.9
3722	1	1.1
3731	1	.6
Total	30	37.6
YOUNGSTOWN-WARREN		
2522	1	4.0
3069	1	1.1
3111	1	.6
3263	1	.5
3312	13	51.8
3315	1	5.7
3317	2	1.1
3399	1	.9
3442	1	1.8
3443	1	.6
3461	1	.8
3499	1	.7
3542	1	.5
3641	2	1.5
3679	1	.5
3714	2	3.6
3722	1	.8
3742	2	2.0
Total	34	78.6
△ASHTABULA		
3313	1	1.1
3423	1	.6
3621	1	.5
3651	1	.5
Total	4	2.6
△MANSFIELD		
2761	1	.5
3011	1	2.2
3312	3	2.6
3461	1	2.6
3619	1	.9
3631	1	1.0
3639	2	5.0
Total	10	14.8
△MARION		
3531	1	1.1
3566	1	.6
3633	1	.5
3714	1	.5
Total	4	2.6
△NEWARK		
3296	1	2.4
3352	1	1.5
3639	1	.9
3714	1	2.0
Total	4	6.8
△PORTSMOUTH		
2819	1	2.4
3141	2	3.7
3312	1	2.8
Total	4	8.9
△SANDUSKY		
2531	1	.6
3562	1	2.4
3651	2	3.3
Total	4	6.2
△ZANESVILLE		
3221	1	.9
3253	1	1.2
3312	1	.5
3611	2	1.3
Total	5	3.9
OKLAHOMA		
OKLAHOMA CITY		
2711	1	.7
3441	1	.7
3533	1	.7
Total	3	2.1
TULSA		
2211	1	1.1
2711	1	.6
2911	1	1.5
3323	1	.6
3443	1	1.2
3533	2	1.4
3721	1	4.9
3791	1	.7
Total	9	12.4
OREGON		
EUGENE		
2033	1	.6
2421	1	1.6
Total	2	2.2
PORTLAND		
2033	1	.5
2052	1	.6
2231	1	.5
2253	1	1.9
2421	2	2.1
2432	1	4.0
2433	1	.6
2511	1	.7
2611	1	.5
2621	1	2.0
2649	1	.5
2711	2	1.3
3323	1	.6
3334	2	2.2
3411	1	.7
3441	1	.7
3443	1	.9
3537	1	.8
3729	1	.7
3731	1	.6
Total	23	22.6
△SALEM		
2033	1	1.2
Total	1	1.2

△Denotes SM potential metropolitan area

"LOOK ALIKES"

BUT WHAT A DIFFERENCE TO THE PLASTICS ENGINEER

To the untrained eye these containers look alike as peas. But the plastics engineer recognizes that they can be produced by a variety of processes—blow molding, injection molding, extruding or vacuum forming—from many different materials, such as styrene, polyethylene, polypropylene, acetate, etc.

In today's complex plastics industry it is more difficult than ever before to distinguish among the different properties of the wide range of materials available, to weigh processing characteristics, to evaluate equipment advantages. That's why the *plastics engineer* has become *all-important* in the specification and purchase of materials, equipment, supplies.

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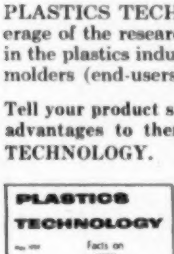

PLASTICS

THE MAGAZINE OF APPLIED ENGINEERING

TECHNOLOGY

A BILL BROTHERS PUBLICATION
630 Third Avenue, New York 17, New York

Plant Locations in Metropolitan Areas by SIC Codes

SM Estimates, 1959, for Plants (500 or more employees) and Employment

SIC Code	Plants	Employment (thous.)
PENNSYLVANIA		
ALLENTOWN-BETHLEHEM-EASTON		
2121	1	.5
2221	1	.5
2251	1	.5
2311	1	.6
2321	1	.7
2396	1	.5
2649	1	1.2
2711	1	.6
2751	1	.6
2818	1	.6
2819	1	.7
3241	1	.6
3312	2	1.0
3441	2	19.9
3461	1	.5
3561	1	4.1
3585	1	.6
3611	1	1.3
3613	2	1.9
3661	1	.6
3671	1	3.2
3711	1	3.8
Total	25	44.5
ALTOONA		
2253	1	.6
2751	2	1.4
3671	1	.6
Total	4	2.6
ERIE		
2522	1	.6
2621	1	2.1
3069	2	1.5
3292	1	.7
3321	1	1.6
3432	1	.6
3443	1	.6
3481	1	.6
3531	1	1.3
3585	1	4.0
3632	1	5.2
3714	1	.8
3721	1	.8
3722	1	.8
3741	1	4.5
3842	1	.7
3941	2	1.6
Total	19	28.0
HARRISBURG		
2072	1	3.4
2271	1	1.0
2711	1	.5
3011	1	.5
3141	2	1.4
3312	3	7.3
3391	1	.7
3442	1	.7
3443	1	.8
3643	1	1.2
3722	1	1.8
Total	14	19.3
JOHNSTOWN		
2335	1	.6
3312	1	.6
3321	1	12.4
3323	1	1.9
3569	1	.5
Total	5	16.0
LANCASTER		
2121	1	.5
2254	1	.6
3292	1	1.1
3429	1	.8
3432	1	.9
3461	1	.5
3522	1	1.7
3591	1	.5
3639	1	2.0
3671	1	3.5
3871	1	2.1
3941	1	.7
3982	1	4.0
Total	13	18.9
PHILADELPHIA		
2033	2	7.0
2051	6	5.0
2052	2	1.6
2062	2	2.6
2071	1	2.2
2072	1	.5
2082	1	.9
2085	1	1.1
2099	1	.8
2121	4	5.1
2231	2	1.2
2253	1	.6
2261	1	.7
2271	1	1.1
2311	5	4.2
2329	3	1.9
2335	2	1.6
2352	1	2.
2363	1	.7
2621	3	3.5
2641	1	.5
2651	1	1.7
2711	4	6.7
2721	2	7.0
2751	2	1.5
2812	1	.8
2815	2	2.7
2818	1	2.1
2819	1	.7
2821	2	8.4
2824	1	1.3
2834	5	4.9
2851	1	1.2
2911	6	14.9
2992	1	.5
3011	3	5.1
3069	2	1.2
3079	3	1.8
3111	2	1.1
3253	1	.6
3259	1	.6
3291	1	.6
3292	1	1.0
3312	9	18.5
3317	1	1.0
3321	1	1.2
3323	1	1.2
3391	1	.7
3425	1	1.8
3433	1	.6
3441	2	2.4
3442	2	1.2
3443	2	2.0
3452	2	2.3
3461	2	3.7
3481	1	.5
3494	1	.9
3496	1	.5
3499	1	2.4
3519	2	1.5
3535	1	.9
3537	1	3.6
3552	2	1.4
3564	1	.8
3559	1	.6
3562	2	3.8
3566	2	1.0
3569	1	.5
3571	1	.5
3613	1	.5
3622	3	8.9
3639	2	1.4
3642	1	.7
3643	1	.6
3651	9	28.4
3671	1	2.8
3679	1	1.2
3691	1	1.2
3711	3	4.0
3714	3	2.6
3721	1	4.0
3722	2	13.2
3723	1	6.4
3731	2	8.4
3741	1	4.8
3742	2	4.8
3821	5	9.9
3949	1	.6
3951	1	.5
3982	1	.8
Total	172	272.4
PITTSBURGH		
2033	1	2.4
2052	1	.9
2071	1	.6
2082	2	1.6
2499	2	1.1
2651	1	.5
2711	3	2.7
2815	1	1.1
2818	1	.6
2821	1	.6
3069	1	.9
3079	2	1.0
3211	3	4.2
3221	3	2.9
3229	3	2.5
3312	34	92.5
3315	1	.5
3317	1	3.5
3321	5	5.2
3323	4	8.7
3333	2	2.1
3351	1	.7
3352	1	2.4
3361	1	1.7
3391	2	2.4
3399	1	1.8
3411	1	1.2
3429	1	.8
3441	5	12.0
3443	3	2.8
3452	3	2.9
3461	2	2.2
3494	1	1.8
3498	1	.7
3499	1	1.5
3511	2	7.6
3533	1	2.6
3544	1	1.1
3545	3	2.5
3548	2	3.9
3612	2	2.7
3622	5	7.4
3639	1	1.2
3643	2	2.3
3651	1	1.7
3699	1	5.7
3711	2	3.9
3714	1	.8
3731	1	1.0
3741	1	8.3
3742	1	1.2
3821	2	2.4
3842	1	1.3
Total	127	228.6
READING		
2071	1	.9
2241	1	.6
2251	1	3.7
2329	1	.6
2656	1	.6
3312	1	2.4
3494	1	1.0
3548	1	1.0
3552	2	4.3
3631	1	1.0
3714	1	2.0
3988	1	.5
Total	13	18.6
SCRANTON		
2282	2	1.1
2292	1	.6
2299	1	.5
2327	2	1.3
2732	2	1.1
3079	1	.6
3299	1	.7
3652	1	.7
3811	1	1.5
Total	12	8.1
WILKES BARRE-HAZELTON		
2082	1	.5
2121	5	3.5
2221	1	.7
2321	1	1.0
2342	1	.5
2363	1	.5
3141	1	.5
3315	2	1.4
3715	1	.5
Total	14	9.1
YORK		
2033	1	.8
2321	1	.5
2511	1	.9
2522	1	.6
2621	1	.7
3141	1	.8
3433	1	.6
3481	1	.5
3499	1	.9
3511	1	.7
3522	1	.5
3551	1	.7
3585	1	4.4
3843	1	.7
Total	14	13.3
△LEBANON		
3312	1	2.3
3323	1	.9
Total	2	3.2
△NEW CASTLE		
3262	1	1.4
3269	1	1.2
3312	1	1.6
3498	1	2.3
3542	2	2.0
Total	6	8.5
△SHARON-FARRELL-SHARPSVILLE		
3312	1	4.9
3323	1	.5
3331	1	.7
3443	1	.6
3519	1	2.0
3612	1	7.3
3742	1	.5
Total	7	16.5
△WILLIAMSPORT		
2241	1	.7
2321	1	.7
2649	1	.5
3316	1	1.0
3569	1	.6
3641	1	1.9
3722	1	2.9
Total	7	8.3
RHODE ISLAND		
PROVIDENCE-PAWTUCKET		
2082	1	.7
2211	2	1.1
2221	1	.6
2261	1	.5
2269	3	4.6
2282	1	.5
2297	1	.5
2361	1	1.0
2711	1	1.0
3021	1	.9
3069	3	3.3
3229	1	.6
3315	1	1.4
3351	2	1.1
3421	1	.9
3423	1	1.6
3494	1	1.0
3541	1	6.9
3545	1	.8
3582	1	1.2
3569	1	.7
3643	6	4.0
3679	1	.6
3821	1	.7
3822	1	1.0
3872	1	1.0
3911	2	1.1
3914	1	1.6
3941	1	.6
3961	5	4.3
3962	1	.5
Total	47	48.2

△Denotes SM potential metropolitan area

Plant Locations in Metropolitan Areas by SIC Codes

SM Estimates, 1959, for Plants (500 or more employees) and Employment

SIC Code	Plants	Employment (thous.)
SOUTH CAROLINA		
CHARLESTON		
2121	1	1.3
2321	1	.5
2611	1	.5
2621	1	.5
3292	1	.6
Total	5	3.4
COLUMBIA		
2211	2	2.6
Total	2	2.6
GREENVILLE		
2211	6	7.0
2221	6	5.9
2231	1	.5
2251	2	2.2
2321	1	.6
2331	1	.9
2342	1	1.3
3564	1	.6
Total	19	19.0
△SPARTANBURG		
2211	14	11.8
2221	2	2.8
2261	1	2.7
2271	1	.9
2321	1	.5
2335	1	.5
Total	20	19.1
SOUTH DAKOTA		
SIOUX FALLS		
2011	1	3.0
Total	1	3.0
TENNESSEE		
CHATTANOOGA		
2211	1	1.0
2231	1	1.3
2251	1	.8
2252	2	1.3
2284	1	1.3
2298	2	4.1
2818	1	.6
3264	1	1.2
3321	1	.5
3431	1	.9
3443	1	4.4
3494	1	.8
Total	14	18.2
KNOXVILLE		
2211	2	1.8
2251	1	1.0
2254	1	2.5
2311	2	2.0
2819	2	10.4
2821	1	.7
3334	1	5.4
3352	1	2.2
3821	1	2.0
Total	12	28.0
MEMPHIS		
2051	1	.5
2261	1	.5
2421	2	1.3
2611	1	.5
2811	1	.9
2654	1	.5
2711	1	.6
2834	1	1.0
3011	1	3.8
3522	1	2.5
3564	1	.5
3711	1	1.6
3715	1	.5
Total	14	14.7
NASHVILLE		
2211	1	1.3
2252	1	.8
2329	1	.5
2711	1	.8
2741	2	2.2
2821	1	1.3
2824	1	2.5
2861	1	3.1
3141	1	11.0
3231	1	1.8
3729	1	2.8
Total	12	28.1
△BRISTOL-JOHNSON CITY-KINGSPORT		
2211	1	1.0
2221	1	.5
2328	1	.5
2511	1	.5
2821	1	1.4
2732	1	1.7
2824	3	9.3
3211	1	.8
Total	10	15.7
TEXAS		
ABILENE		
3871	1	1.0
Total	1	1.0
BEAUMONT-PORT ARTHUR		
2818	1	3.0
2822	1	.6
2911	5	13.9
3317	1	2.6
3731	2	1.4
Total	10	21.5
CORPUS CHRISTI		
2812	1	.8
2818	1	.5
3333	1	.7
Total	3	2.0
DALLAS		
2051	1	.5
2211	1	.7
2641	1	.7
2651	1	.7
2711	2	1.9
3533	1	.8
3559	1	.8
3651	1	2.1
3679	4	11.4
3711	1	1.5
3721	2	25.5
3729	1	.7
Total	17	47.3
EL PASO		
2329	3	2.0
2911	1	.8
3331	1	.6
3332	1	.7
Total	6	4.1
FORT WORTH		
2011	1	.8
2041	1	.8
2329	1	.7
2651	1	.8
2711	1	.7
3411	1	.6
3711	1	1.0
3721	2	29.0
Total	9	34.4
GALVESTON		
2815	1	2.8
2821	1	1.8
2911	2	3.6
3339	1	.7
3741	1	2.3
Total	6	11.2
HOUSTON		
2082	1	.7
2393	1	.7
2621	1	3.5
2711	2	1.2
2812	1	.5
2818	2	3.7
2822	1	.5
2871	1	.7
2911	6	18.1
3312	1	4.0
3411	2	1.4
3443	1	.7
3498	1	.7
3533	4	10.9
Total	25	47.3
SAN ANTONIO		
2082	1	.5
2711	1	.5
3585	1	.7
Total	3	1.7
TYLER		
3321	2	1.4
Total	2	1.4
WACO		
3011	1	1.8
3221	1	.8
3722	1	.8
Total	3	3.4
UTAH		
OGDEN		
2011	1	.6
2063	1	1.0
3722	1	1.8
Total	3	3.4
PROVO-OREM		
3312	3	4.9
Total	3	4.9
SALT LAKE CITY		
2063	1	.6
2711	1	.6
2911	1	.8
3331	1	7.5
3531	1	.8
Total	5	10.3
VIRGINIA		
LYNCHBURG		
2141	1	.8
2211	1	.9
2221	1	.7
2252	1	.7
2328	2	1.2
2511	1	1.8
3141	4	4.6
3321	2	1.7
3569	1	.9
3662	1	1.3
Total	15	14.6
NEWPORT NEWS-HAMPTON		
3731	1	14.0
Total	1	14.0
NORFOLK-PORTSMOUTH		
2071	1	1.5
2711	1	.6
3711	1	1.6
Total	3	3.7
RICHMOND		
2082	1	.7
2111	3	5.6
2121	1	.5
2141	1	1.5
2311	1	1.0
2392	1	.6
2711	1	.8
2821	1	1.4
2824	1	2.3
3497	1	1.0
Total	12	15.4
ROANOKE		
2221	1	.7
2253	1	.6
2335	1	1.4
2511	1	.7
2824	1	2.4
3441	1	.7
3494	1	.6
Total	7	7.1
△DANVILLE		
2141	1	.7
2211	1	11.0
Total	2	11.7
△PETERSBURG-HOPEWELL		
2111	1	2.2
2611	1	1.0
2818	2	2.2
2819	1	2.2
3151	1	1.3
Total	6	8.5
WASHINGTON		
SEATTLE		
2041	1	.5
2421	3	2.3
2432	1	.6
2611	1	1.7
2711	2	1.3
3312	1	3.2
3711	1	1.1
3721	3	56.1
3731	2	3.2
Total	15	68.0
SPOKANE		
2011	1	.6
3334	1	2.7
3352	1	3.3
Total	3	6.6
TACOMA		
2432	1	.5
2611	1	.7
3331	1	.9
Total	3	2.1
△BELLINGHAM		
3731	1	1.3
Total	1	1.3
△PASCO-KENNEWICK-RICHLAND		
2819	1	9.0
Total	1	9.0
WEST VIRGINIA		
CHARLESTON		
2812	1	1.7
2818	3	8.0
3211	1	1.9
3221	1	1.3
3423	1	.5
Total	7	13.4
HUNTINGTON-ASHLAND		
2121	1	.5
2335	1	.9
2815	1	.6
2819	1	1.1
2911	1	.7
3221	1	1.4
3312	3	5.4
3322	1	.8
3356	1	2.0
3871	1	2.0

△Denotes SM potential metropolitan area

Plant Locations in Metropolitan Areas by SIC Codes

SM Estimates, 1959, for Plants (500 or more employees) and Employment

SIC Code	Plants	Employment (thous.)
3711......	1	1.0
Total......	13	10.4
WHEELING		
2131......	1	.7
2812......	1	.6
3229......	2	1.4
3312......	2	2.5
3323......	1	1.3
3444......	1	5.5
3461......	1	.5
3496......	1	.7
3941......	1	1.5
Total......	11	14.7
△CLARKSBURG		
3211......	1	1.1
3229......	1	1.5
3624......	1	.9
Total......	3	3.5
△PARKERSBURG		
2818......	1	.7
2824......	1	2.8
3229......	1	.7
3423......	1	.9
Total......	4	5.1
WISCONSIN		
GREEN BAY		
2649......	2	2.0
3531......	1	1.2
Total......	3	3.2
KENOSHA		
2254......	1	.7
2818......	1	3.8
3361......	1	1.4
3423......	1	.5
3961......	1	.6
3711......	1	11.5
3722......	1	.6
Total......	7	18.9
MADISON		
2011......	1	4.0
3361......	1	.5
3541......	1	1.2
3662......	1	1.2
3642......	1	.6
Total......	5	7.5
MILWAUKEE		
2011......	1	1.6
2026......	1	.7
2033......	1	1.0
2051......	1	.8
2082......	4	6.7
2253......	1	.5
2330......	1	.8
2391......	1	.5
2649......	1	2.0
2651......	2	1.1
2711......	2	1.3
2751......	1	.5
2861......	1	.7
2911......	1	.6
2992......	2	1.9
3111......	1	.8
3141......	4	4.4
3317......	2	9.5
3321......	2	2.1
3381......	1	5.6
3411......	2	1.7
3429......	1	.5
3433......	1	.6
3443......	3	2.8
3444......	1	1.0
3461......	1	.6
3494......	1	.5
3511......	1	1.0
3519......	4	6.2
3522......	2	5.7
3531......	6	30.0
3535......	1	1.5
3541......	1	1.3
3544......	1	.5
3551......	1	1.1
3561......	1	.6
3564......	1	.5
3566......	2	2.5
3586......	1	.5
3612......	1	1.0
3621......	2	2.3
3622......	5	13.2
3639......	2	2.7
3679......	1	6.0
3693......	1	1.6
3711......	1	10.4
3714......	1	2.8
3751......	1	1.2
3811......	1	4.0
3821......	3	7.6
Total	82	154.8
RACINE		
2731......	1	1.8
2942......	1	.9
3322......	1	.8
3323......	1	.8
3433......	1	.7
3522......	3	4.6
3566......	1	.5
3621......	1	.5
3631......	1	.6
3679......	1	.5
3714......	1	.5
Total......	13	12.2
△APPLETON		
2023......	1	.5
2621......	1	1.5
2640......	1	.5
Total......	3	2.5
△BELOIT-JANESVILLE		
3141......	1	1.1
3553......	1	.6
3554......	1	2.4
3621......	1	.5
3711......	2	4.8
3714......	1	.5
3741......	1	2.6
3791......	1	1.0
3951......	1	1.5
Total......	10	15.0
△EAU CLAIRE		
2621......	1	.6
3011......	1	3.1
3361......	1	1.2
Total......	3	4.9
△FOND DU LAC		
3519......	1	.8
3541......	1	.7
3633......	1	1.1
Total......	3	2.6
△LA CROSSE		
3621......	1	.8
3461......	1	.5
3522......	1	1.3
3585......	1	2.7
Total......	4	5.3
△MANITOWOC-TWO RIVERS		
2531......	1	1.6
3461......	2	3.8
3531......	1	.9
3731......	1	1.3
Total......	5	7.4
△OSHKOSH		
2431......	2	1.1
2871......	1	.5
2641......	1	6.4
2649......	2	6.5
2732......	1	.8
3714......	1	1.0
Total......	8	16.3
△SHEBOYGAN		
2511......	1	.5
3111......	1	.6
3431......	1	3.2
3461......	1	1.0
Total......	4	5.3
△WAUSAU		
2621......	1	.5
2649......	1	.5
3621......	1	.6
Total......	3	1.6
WYOMING		
△CASPER		
2911......	1	.7
Total......	1	.7

△Denotes SM potential metropolitan area

Industry on the Move

(Continued from page 86)

At that time we will also be able to calculate the ratio of shipments per employee on the new code. This will make it possible to convert the employment totals shown here (and in the directory) into shipments. For example, let us assume that in industry 2011 (old code basis) the ratio of shipments to employment is $58,900 per employee. We may infer that within meat packing, plants must have shipments per worker ratios close to this norm, otherwise plants with ratios far below the national average could not expect to survive. This can be tested by reference to the 1958 Census returns. Multiplying the employment in meat packing by the $58,900 ratio, we get a series of estimated shipments which does not differ radically from the actual shipments reported by regions by the Census Bureau. Here, for example, is a comparison for the New England, Middle Atlantic, East North Central and West North Central states.

Meat Packing—2011 (old code)

	Employment (th.)	Shipments Est.	Actual
N.E.	2.5	147	139
M.A.	18.5	1090	1102
E.N.C.	49.2	2897	2867
W.N.C.	71.4	4205	4344

Thus we can see that within any particular 4-digit industry the actual ratios do tend to fluctuate rather close to the national average. From industry to industry, however, the productivity ratios vary greatly—from averages well below $10,000 per worker in the apparel industries, in which labor constitutes the major cost item, to averages of the order of $100,000 per worker in industries like petroleum refining, where high fixed capital costs are dominant.

How can the industrial sales manager use this material for setting quotas? By translating the metropolitan area employment into shipments he will discover in each area, how

many plants there are in the industries he hopes to sell and their total estimated shipments, and he will be able to translate his findings into a sales quota for his product.

Reference to the SM directory will reveal the actual plant identities and the street addresses to which his salesmen can be directed. This of course will not generally constitute his full quota for the area since the data in this issue do not encompass the smaller plants. Even so, it should indicate half of his quota —the more easily sold half by virtue of its concentration in the smallest number of plants.

Degree of Change in 450 Industries

The information in the following tables is of particular value to the long-range planner. He can get a quick check on the relative progress of each of the 450 4-digit industries.

The percent of change relates the 1947 Census figures to the 1960 estimates. The 1947 figures are not shown because the degree of change over the 13-year period is the significant statistic. Since the figures for 1960 and 1958 are identified by the old SIC code numbers in effect in 1947, the data can be directly compared.

Estimates of 1960 employee and value-of-shipments totals were obtained by Peter B. B. Andrews, who surveyed the 314-man panel comprising the Board of Analysts whose Future Sales Ratings appear in Sales Management.

The term "Value of Products Shipped" represents net selling value, f.o.b. plant, after discounts and allowances, of all shipments of products from manufacturing establishments of an industry, plus receipts for miscellaneous activities of such plants; it excludes freight charges and excise taxes.

Products transferred to other establishments of the same company (such as other manufacturing plants, separate sales branches, or retail dealers) are valued at the nearest approximation to the commercial selling value, f.o.b. plant, and not the cost of production.

It should be noted, therefore, that for establishments classified in a given industry the value of shipments includes not only (a) their value of products primary to the industry but also (b) their value of secondary products (which are primary to other industries), and (c) their miscellaneous receipts for repair work, sales of scrap, installation of own products, receipts for contract work, etc. Excluded from the value of shipments, however, are sales of products bought and resold in the same condition.

Out of 450 Industries

These Industries Showed Greatest Gains in Employment and Shipments for 1947-1960

EMPLOYMENT

SIC Code	Industry	% Employment Gain	Rank
3729	Aircraft equipment, n.e.c.	884	1
2951	Paving mixtures and blocks	309	2
3662	Electronic tubes	306	3
3811	Scientific instruments	293	4
2694	Pulp goods, pressed and molded	182	5
2339	Women's outerwear, n.e.c.	178	6
2015	Poultry dressing plants	159	7
2732	Book printing	158	8
3716	Automobile trailers	151	9
3594	Industrial patterns and molds	143	10
3613	Electric measuring instruments	141	11
3722	Aircraft engines	139	12
3971	Plastic products, n.e.c.	132	13
3442	Metal doors, sash and trim	128	14
2819	Inorganic chemicals, n.e.c.	121	15
2391	Curtains and draperies	118	16
3721	Aircraft	111	17
3281	Cut-stone and stone products	109	18
3661	Radios and related products	104	19
3571	Computing and related machines	102	20
2823	Plastic materials	102	20

VALUE PRODUCTS SHIPPED

SIC Code	Industry	% Value of Shipments Gain	Rank
3729	Aircraft equipment, n.e.c.	1938	1
3662	Electronic tubes	1025	2
3811	Scientific instruments	909	3
3511	Steam engines and turbines	605	4
3497	Metal foil	491	5
3722	Aircraft engines	475	6
2823	Plastic materials	472	7
3932	Organs	458	8
2694	Pulp goods, pressed and molded	456	9
2216	Finishing wool textiles	455	10
3334	Primary aluminum	432	11
2819	Inorganic chemicals, n.e.c.	419	12
2951	Paving mixtures and blocks	409	13
2339	Women's outerwear, n.e.c.	392	14
3613	Electrical measuring instruments	386	15
2897	Insecticides and fungicides	373	16
2037	Frozen fruits and vegetables	367	17
2322	Men's and boys' underwear	366	18
3971	Plastic products, n.e.c.	361	19
3571	Computing and related machines	357	20

Food & Kindred Products—SIC 20

SM Estimates, 1960, of Employment and Value of Products Shipped

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT (in thousands) 1958	EMPLOYMENT 1960	EMPLOYMENT % Gain 1947-1960	VALUE PRODUCTS SHIPPED ($ millions) 1958	VALUE 1960	VALUE % Gain 1947-1960
20	FOOD AND KINDRED PRODUCTS						
201	*Meat Products*						
2011	Meat packing, wholesale	203.9	201.5	− 3	12,012	13,489	+ 50
2013	Prepared meats	48.4	48.1	+ 8	1,991	2,194	+ 37
2015	Poultry dressing plants	56.2	55.9	+159	1,713	1,920	+300
202	*Dairy Products*						
2021	Creamery butter	17.5	17.5	− 15	1,028	1,055	+ 25
2022	Natural cheese	15.3	15.1	+ 23	756	787	+ 66
2023	Concentrated milk	12.3	12.1	− 27	774	788	+ 4
2024	Ice cream and ices	35.1	36.2	+ 1	965	1,062	+ 72
2025	Special dairy products	5.8	5.9	− 20	275	279	− 4
2027	Fluid milk	206.6	213.2	..	6,213	6,504	..
203	*Canned and Frozen Foods*						
2031	Canned sea food	12.6	12.6	− 38	271	280	+ 23
2032	Cured fish	2.0	2.0	− 17	53	56	+ 77
2033	Canned fruits and vegetables	123.4	127.2	− 6	3,003	3,219	+ 96
2035	Pickles and sauces	22.7	23.3	+ 9	642	703	+ 96
2036	Packaged sea food	17.7	17.5	..	307	301	..
2037	Frozen fruits and vegetables	26.3	28.2	+ 62	690	724	+367
204	*Grain Mill Products*						
2041	Flour and meal	28.3	27.6	− 30	2,094	2,082	− 19
2042	Prepared animal feeds	57.0	56.1	0	324	319	− 86
2043	Cereal breakfast foods	11.0	10.8	− 4	444	480	+ 74
2044	Rice milling	3.9	3.9	− 5	325	331	+ 47
2045	Flour mixes	4.7	4.7	+ 52	273	286	+279
205	*Bakery Products*						
2051	Bread and related products	288.2	287.2	+ 15	4,096	4,293	+ 89
2052	Biscuit and crackers	42.8	44.9	− 3	952	1,018	+ 79
206	*Sugar*						
2061	Raw cane sugar	3.0	2.6	− 44	72	75	+ 26
2062	Cane-sugar refining	15.2	12.9	− 26	997	1,040	+ 27
2063	Beet sugar	10.3	9.4	− 30	392	423	+ 61
207	*Candy and Related Products*						
2071	Confectionery products	65.7	60.9	− 19	1,217	1,251	+ 32
2072	Chocolate and cocoa products	8.3	7.6	− 21	448	494	+ 30
2073	Chewing gum	5.3	4.8	− 30	176	182	+ 23
208	*Beverages*						
2086	Bottled soft drinks	95.7	103.5	+ 30	1,492	1,664	+122
2082	Malt liquors	71.5	74.4	− 10	1,963	2,081	+ 58
2083	Malt	2.4	2.5	0	196	205	− 20
2084	Wines and brandy	5.9	6.3	− 18	..	..	..
2085	Distilled liquor	20.4	21.8	− 28	942	1,004	+ 15
209	*Miscellaneous Foods*						
2092	Shortening and cooking oils	9.6	9.5	+ 19	1,004	985	+ 11
2093	Margarine	2.7	2.7	+ 4	219	224	+ 4
2094	Corn wet milling	13.8	14.0	+ 14	529	539	+ 17
2095	Flavorings	9.4	9.5	− 19	513	531	+ 69
2097	Manufactured ice	15.0	14.2	− 70	156	148	− 46
2098	Macaroni and spaghetti	6.8	6.9	− 14	180	189	+ 69
2099	Food preparations, n. e. c.	86.8	88.6	+ 49	3,862	4,240	+166

Tobacco Products—SIC 21

21	TOBACCO PRODUCTS						
2111	Cigarettes	33.8	36.6	+ 29	2,180	2,325	+105
2121	Cigars	29.4	31.3	− 34	361	403	+ 30
2131	Chewing and smoking tobacco	6.2	6.2	− 44	174	177	+ 26
2141	Tobacco stemming and redrying	15.1	15.6	− 40	1,179	1,236	+ 29

Textile Mill Products—SIC 22

22	TEXTILE MILL PRODUCTS						
221	*Woolen and Worsted Manufactures*						
2211	Scouring and combing plants	6.1	6.4	− 24	89	102	+ 34
2212	Yarn mills, wool, except carpet	15.5	16.2	− 51	256	288	− 15
2213	Woolen and worsted fabrics	50.0	52.3	− 61	780	875	− 35
2216	Finishing wool textiles	5.0	5.2	− 10	144	161	+465
222	*Yarn and Thread Mills*						
2222	Yarn and throwing mills	8.8	8.7	− 42	120	127	+ 98
2223	Thread mills	11.1	10.9	− 26	167	180	+ 17
2224	Yarn mills, cotton system	7.6	7.5	− 38	1,156	1,172	+ 1
223	*Broad Woven Fabrics*						
2233	Cotton broad-woven fabrics	242.5	240.4	− 27	2,794	3,120	+ 7
2234	Synthetic broad-woven fabrics	82.0	79.1	− 19	1,239	1,393	+ 39
2241	Narrow fabric mills	24.5	26.3	− 6	299	346	+ 61
225	*Knitting Mills*						
2251	Full-fashioned hosiery mills	33.8	38.2	− 48	..	..	..
2252	Seamless hosiery mills	70.0	74.8	+ 15	603	661	+102
2253	Knit outerwear mills	60.8	64.7	+ 88	824	925	+108
2254	Knit underwear mills	27.7	29.8	− 27	291	327	+ 11
2256	Knit fabric mills	18.4	19.5	+ 44	491	563	+181
2261	Finishing textiles, except wool	74.0	78.9	+ 1	1,033	1,141	+115
227	*Carpets and Rugs*						
2271	Wool carpets and rugs	25.1	24.0	− 40	..	..	..
2273	Carpets and rugs, except wool	13.7	14.2	+100	311	346	+816
2274	Hard-surfaced floor covering	8.1	8.4	− 15	182	219	+ 27
228	*Hats, Except Cloth and Millinery*						
2281	Fur-felt hats and hat bodies	6.3	6.2	− 52	68	72	− 45
2282	Wool-felt hats and hat bodies	1.8	1.8	− 80	14	16	− 39
2283	Straw hats	2.1	2.0	− 17	20	20	+ 11
2284	Hatter's fur	0.6	0.6	− 60	8	8	− 67
229	*Miscellaneous Textile Goods*						
2291	Felt goods, n. e. c.	4.6	4.8	+ 2	95	112	+ 87
2292	Lace goods	6.8	7.1	− 18	64	71	+ 3
2293	Padding and upholstery filling	7.1	7.5	− 10	140	156	+ 42
2294	Processed textile waste	4.6	4.9	− 16	93	111	+ 96
2295	Coated fabrics, except rubberized	10.5	11.1	+ 29	253	284	+ 74
2298	Cordage and twine	9.6	10.1	− 38	141	157	− 8

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Apparel & Related Products—SIC 23

SM Estimates, 1960, of Employment and Value of Products Shipped

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT (in thousands) 1958	EMPLOYMENT 1960	EMPLOYMENT % Gain 1947-1960	VALUE PRODUCTS SHIPPED ($ millions) 1958	VALUE 1960	VALUE % Gain 1947-1960
23	APPAREL AND RELATED PRODUCTS						
231	*Men's and Boys' Suits and Coats*						
2311	Men's and boy's suits and coats	121.2	127.1	− 14	1,274	1,486	+ 6
232	*Men's and Boys' Furnishings*						
2321	Men's dress shirts and nightwear	103.6	116.9	+ 24	996	1,128	+157
2322	Men's and boys' underwear	12.2	13.8	+ 89	116	135	+386
2323	Men's and boys' neckwear	7.7	8.7	− 19	102	116	+ 84
2325	Men's and boys' cloth hats	7.8	8.8	+ 60	69	75	+341
2327	Separate trousers	51.2	53.5	+ 13	441	503	+170
2328	Work shirts	6.3	6.6	− 46	51	59	− 5
2329	Men's and boys' clothing, n. e. c.	91.3	95.4	+ 28	1,304	1,194	+294
233	*Women's and Misses' Outerwear*						
2331	Blouses	46.4	47.2	+ 44	430	482	+ 74
2333	Dresses, unit price	133.8	134.4	0	1,629	1,830	+ 35
2334	Dresses, dozen price	56.9	57.7	+ 19	507	967	+ 63
2337	Women's suits, coats, and skirts	83.0	84.1	+ 17	1,223	1,376	+ 26
2339	Women's outerwear n. e. c.	34.3	34.6	+178	426	477	+392
234	*Women's Undergarments*						
2341	Women's and children's underwear	73.6	75.1	+ 30	819	920	+ 60
2342	Corsets and allied garments	38.3	39.2	+ 7	471	528	+ 90
2351	Millinery	17.9	14.9	− 29	191	214	+ 20
236	*Children's Outerwear*						
2361	Children's dresses	34.6	35.4	+ 57	330	386	+109
2363	Children's coats	12.2	12.5	+ 14	102	103	+ 61
238	*Miscellaneous Apparel*						
2384	Robes and dressing gowns	11.6	12.3	+ 13	135	152	+ 43
2385	Waterproof outer garments	13.4	14.1	+ 64	149	168	+107
2386	Leather and sheep-lined clothing	4.6	4.8	+ 14	65	74	+ 81
2387	Belts	10.7	11.2	+ 22	100	114	+ 65
239	*Fabricated Textiles, n. e. c.*						
2391	Curtains and draperies	16.2	17.4	+118	214	244	+122
2392	Housefurnishings, n. e. c.	37.9	40.7	+ 2	628	703	+ 40
2393	Textile bags	9.0	9.6	− 31	202	228	+ 38
2394	Canvas products	9.9	11.5	+ 9	131	149	+ 64
2395	Tucking, pleating, and stitching	5.0	5.4	− 9	31	35	+ 40
2396	Trimmings and art goods	16.5	17.7	+ 22	286	322	+152
2397	Schiffli-machine embroideries	5.8	6.2	+ 9	76	87	+ 56
2398	Embroideries, except Schiffli	7.8	8.1	− 17	57	63	+ 43
2399	Textile products, n. e. c.	18.1	18.8	+ 8	243	269	+ 42

Lumber & Wood Products—SIC 24

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT 1958	EMPLOYMENT 1960	EMPLOYMENT % Gain 1947-1960	VALUE 1958	VALUE 1960	VALUE % Gain 1947-1960
24	LUMBER, WOOD PRODUCTS EXC. FURNITURE						
2411	Logging Camps and Contractors						
242	*Lumber and Basic Products*						
2421	Sawmills and planing mills	273.5	282.3	− 26	3,206	3,547	+ 41
2422	Veneer mills	13.0	13.4	+ 28	170	189	+182
2423	Shingle mills	2.7	2.8	+ 17	41	46	+ 77
2424	Cooperage stocks mills	2.9	3.0	− 76	32	36	− 35
2425	Excelsior mills	1.2	1.2	0	13	15	+114
243	*Millwork and Related Products*						
2431	Millwork plants	61.3	63.7	+ 7	1,036	1,119	+106
2432	Plywood plants	47.1	49.0	+ 78	728	794	+182
2433	Prefabricated wood products	13.5	14.1	+ 40	322	351	+241
244	*Wooden Containers*						
2441	Fruit and vegetable baskets	5.2	5.1	− 44	29	31	0
2444	Wooden boxes	28.9	28.2	− 41	311	339	− 7
2445	Cooperage	3.9	3.8	− 59	70	76	− 28
249	*Miscellaneous Wood Products*						
2491	Wood preserving	10.9	11.8	− 27	203	217	*

Furniture & Fixtures—SIC 25

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT 1958	EMPLOYMENT 1960	EMPLOYMENT % Gain 1947-1960	VALUE 1958	VALUE 1960	VALUE % Gain 1947-1960
25	FURNITURE AND FIXTURES						
251	*Household Furniture*						
2511	Wood furniture, not upholstered	126.1	136.3	+ 3	1,389	1,710	+ 90
2512	House furniture, upholstered	67.7	72.6	+ 62	874	1,042	+174
2514	Metal house furniture	30.5	33.1	+ 68	499	594	+ 31
2515	Mattresses and bedding	25.4	27.3	− 10	470	565	+ 71
252	*Office Furniture*						
2521	Wood office furniture	5.8	6.3	− 3	69	87	+ 85
2522	Metal office furniture	17.5	20.5	+ 43	277	345	+174
253	*Public and Professional Furniture*						
2531	Public-building furniture	15.8	17.7	+ 74	206	253	+233
2532	Professional furniture	7.4	8.3	+ 60	104	122	+190
2541	Partitions and fixtures	38.0	40.5	+ 46	580	678	+176
256	*Screens, Shades, and Blinds*						
2561	Window and door screens	4.6	5.0	+ 19	85	97	+149
2562	Window shades	4.7	4.7	− 11	92	106	+ 84
2563	Venetian blinds	6.5	7.1	− 27	94	107	+ 27

Paper & Allied Products—SIC 26

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT 1958	EMPLOYMENT 1960	EMPLOYMENT % Gain 1947-1960	VALUE 1958	VALUE 1960	VALUE % Gain 1947-1960
26	PAPER AND ALLIED PRODUCTS						
261	*Pulp, Paper and Board*						
2612	Paper and paper board mills	188.5	195.2	+ 47‡	4,960	5,539	+112‡
2613	Building paper and board mills	20.0	20.1		387	408	
2641	Paper coating and glazing	24.1	24.8	+ 11	708	801	+150
2651	Envelopes	17.6	18.1	+ 31	270	307	+140
2661	Paper bags	38.5	40.3	+ 81	891	1,039	+225
267	*Paperboard Containers*						
2671	Paperboard boxes	141.6	143.3	+ 31	2,728	3,087	+108
2674	Fiber cans, tubes, drums, etc.	10.6	10.8	+ 17	161	182	+146
269	*Pulp, Paper & Board Products, n. e. c.*						
2691	Die-cut paper and board	11.8	12.5	+ 34	247	279	+185
2693	Wall paper	2.8	2.8	− 49	41	44	− 25
2694	Pulp goods, pressed and molded	4.5	4.8	+182	79	89	+456
2699	Paper and board products, n. e. c.	80.9	87.7	+ 41	1,974	2,218	+182

‡ Combined growth of 2612 and 2613, a single industry in 1947

Printing & Publishing—SIC 27

SM Estimates, 1960, of Employment and Value of Products Shipped

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT (in thousands) 1958	EMPLOYMENT 1960	% Gain 1947-1960	VALUE PRODUCTS SHIPPED ($ millions) 1958	VALUE 1960	% Gain 1947-1960
27	PRINTING, PUBLISHING, ALLIED INDUSTRIES						
2711	Newspapers	296.0	310.7	+ 33	3,848	4,093	+114
2721	Periodicals	65.9	66.8	− 3	1,881	1,871	+ 77
273	*Books*						
2731	Books: publishing & printing	40.1	45.2	+ 13	1,023	1,204	+160
2732	Book printing	27.8	30.9	+158	350	413	+348
2741	Miscellaneous printing	19.8	23.1	+ 93	314	380	+250
2751	Commercial printing	199.3	206.8	+ 8	2,723	2,996	+ 99
2761	Lithographing	98.0	104.8	+ 99	1,473	1,632	+234
2771	Greeting cards	21.5	24.7	+ 37	280	339	+173
278	*Bookbinding and Related Industries*						
2781	Bookbinding	17.9	19.4	− 13	143	167	+ 44
2782	Blankbooks and paper ruling	10.8	11.7	+ 33	136	158	+163
2783	Loose-leaf binders and devices	9.2	10.1	+ 25	112	130	+124
2789	Miscellaneous bookbinding work	4.0	4.3	+ 28	39	46	+ 27
279	*Printing Trades Services*						
2791	Typesetting	18.0	17.9	+ 86	177	188	+143
2792	Engraving and plate printing	9.0	9.1	+ 18	87	94	+109
2793	Photoengraving	17.2	17.4	+ 4	209	232	+ 73
2794	Electrotyping and stereotyping	6.8	6.8	− 6	81	89	+ 51

Chemicals & Allied Products—SIC 28

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT (in thousands) 1958	EMPLOYMENT 1960	% Gain 1947-1960	VALUE PRODUCTS SHIPPED ($ millions) 1958	VALUE 1960	% Gain 1947-1960
28	CHEMICALS, ALLIED PRODUCTS						
281	*Inorganic Chemicals*						
2812	Alkalies and chlorine	20.5	20.9	+ 8	504	575	+176
2819	Inorganic chemicals, n. e. c.	85.1	87.3	+121	2,567	2,924	+419
282	*Organic Chemicals*						
2821	Cyclic (coal-tar) crudes	2.1	2.3	+ 15	116	156	+154
2822	Intermediate coal-tar products	26.0	28.0	− 17	809	1,080	+126
2823	Plastic materials	51.5	57.9	+102	1,849	2,733	+472
2824	Synthetic rubber	9.3	10.8	+ 40	636	774	+229
2825	Synthetic fibers	61.5	64.6	− 7	1,421	1,816	+158
2826	Explosives	15.0	16.2	+ 56	228	279	+105
2829	Organic chemicals, n. e. c.	79.0	87.0	+ 66	3,158	4,166	+328
283	*Drugs and Medicines*						
2831	Biological products	3.7	3.6	+ 27	64	76	+100
2833	Medicinal chemicals	10.2	11.3	− 14	321	372	+ 71
2834	Pharmaceutical preparations	81.7	86.9	+ 38	2,567	3,604	+219
284	*Soap and Related Products*						
2841	Soap and glycerin	20.7	21.4	− 22	1,211	1,280	+ 16
2842	Cleaning and polishing products	21.5	22.8	+ 48	840	990	+237
2843	Sulfonated oils and assistants	1.8	1.7	− 15	62	66	+ 25
285	*Paints and Allied Products*						
2851	Paints and varnishes	56.9	60.2	+ 13	1,809	2,018	+ 62
2852	Inorganic color pigments	11.5	12.3	− 14	421	470	+ 64
2853	Whiting and fillers	1.4	1.5	+ 15	36	39	+106
286	*Gum and Wood Chemicals*						
2861	Hardwood distillation	1.8	1.9	0	21	23	+ 64
2862	Softwood distillation	3.9	4.0	− 13	107	116	+ 82
2863	Gum naval stores	.4	.4	− 33	20	29	− 29
287	*Fertilizers*						
2871	Fertilizers	31.0‡	32.2‡	+ 1‡	1,086‡	1,208‡	+157‡
2872	Fertilizers, mixing only						
288	*Vegetable and Animal Oils*						
2881	Cottonseed oil mills	8.3	7.6	− 47	420	407	− 21
2882	Linseed oil mills	1.1	1.1	− 31	110	112	− 42
2883	Soybean oil mills	8.0	8.7	+ 34	1,078	1,189	+100
2886	Grease and tallow	12.0	12.3	− 1	326	380	+ 28
2887	Fatty acids	1.6	1.8	+ 23	67	69	+ 2
289	*Chemical Products, n. e. c.*						
2891	Printing ink	8.0	8.9	+ 48	223	281	+142
2893	Toilet preparations	29.4	30.1	+ 11	1,046	1,086	+187
2894	Glue and gelatin	6.8	7.0	− 11	194	203	+ 40
2895	Carbon black	3.3	3.4	+ 8	122	134	+ 81
2896	Compressed and liquified gases	10.4	11.5	+ 28	278	309	+232
2897	Insecticide and fungicides	6.4	7.0	+ 71	271	317	+373
2899	Chemical products, n. e. c.	26.1	28.0	+ 50	903	994	+213

‡ Combined figures for 2871 and 2872, a single industry in 1958

To All Industrial Sales Managers

See pages 94, 95

for the announcement and discussion of

SALES MANAGEMENT'S revolutionary new

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Petroleum & Coal Products—SIC 29

SM Estimates, 1960, of Employment and Value of Products Shipped

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT (in thousands) 1958	1960	% Gain 1947-1960	VALUE PRODUCTS SHIPPED ($ millions) 1958	1960	% Gain 1947-1960
29	PETROLEUM & COAL PRODUCTS						
2911	Petroleum refining	146.1	150.0	+ 3	14,535	15,800	+138
295	*Paving and Roofing Materials*						
2951	Paving mixtures and blocks	7.8	11.5	+309	204	280	+409
2952	Roofing felts and coatings	15.5	15.8	− 4	463	425	+ 26
299	*Petroleum & Coal Products, n. e. c.*						
2992	Lubricants, n. e. c.	7.5	7.8	− 2	279	230	+ 16

Rubber Products—SIC 30

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT (in thousands) 1958	1960	% Gain 1947-1960	VALUE PRODUCTS SHIPPED ($ millions) 1958	1960	% Gain 1947-1960
30	RUBBER PRODUCTS						
3011	Tires and inner tubes	87.2	105.3	+ 9	2,520	4,630	+201
3021	Rubber footwear	20.4	22.9	+ 19	229	231	+ 18
3031	Reclaimed rubber	2.0	2.0	− 4	39	41	+142
3099	Rubber industries, n. e. c.	122.3	124.7	+ 11	1,984	2,150	+126

Leather & Leather Products—SIC 31

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT (in thousands) 1958	1960	% Gain 1947-1960	VALUE PRODUCTS SHIPPED ($ millions) 1958	1960	% Gain 1947-1960
31	LEATHER AND LEATHER PRODUCTS						
3111	Leather tanning and finishing	37.1	35.4	− 34	742	784	− 27
3121	Industrial leather belting	4.0	4.3	− 14	66	78	+ 37
3131	Footwear cut stock	17.9	18.4	− 17	296	289	− 9
314	*Footwear, Except Rubber*						
3141	Footwear, except rubber	214.7	219.6	− 5	2,042	2,192	+ 27
3142	House slippers	11.3	11.5	+ 22	110	119	+ 78
315	*Leather Gloves*						
3151	Leather dress gloves	4.1	3.6	+ 60	34	31	− 34
3152	Leather work gloves	2.2	2.0	− 28	19	20	+ 18
3161	Luggage	15.7	16.4	+ 3	186	204	+ 83
317	*Purses and Small Leather Goods*						
3171	Handbags and purses	22.1	22.5	+ 10	234	252	+ 55
3172	Small leather goods	7.5	7.8	+ 39	78	89	+ 34

Stone, Clay & Glass Products—SIC 32

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT (in thousands) 1958	1960	% Gain 1947-1960	VALUE PRODUCTS SHIPPED ($ millions) 1958	1960	% Gain 1947-1960
32	STONE, CLAY AND GLASS PRODUCTS						
3211	Flat glass	21.2	23.4	− 8	395	487	+117
322	*Pressed and Blown Glassware*						
3221	Glass containers	54.9	58.6	+ 24	882	940	+122
3229	Pressed and blown glass, n. e. c.	38.8	40.2	− 5	448	493	+110
3231	Products of purchased glass	22.2	23.7	− 1	442	480	+123
3241	Cement, hydraulic	41.1	42.3	+ 19	1,073	1,116	+173
325	*Structural Clay Products*						
3251	Brick and hollow tile	31.3	32.6	+ 10	289	308	+113
3253	Floor and wall tile	12.5	12.9	+ 87	130	148	+261
3254	Sewer pipe	10.0	10.5	+ 15	97	109	+127
3255	Clay refractories	12.3	12.8	− 29	182	213	+ 95
326	*Pottery and Related Products*						
3261	Vitreous plumbing fixtures	9.7	10.7	+ 37	143	161	+133
3262	Vitreous-china food utensils	8.0	8.9	− 20	52	58	+ 35
3263	Earthenware, food utensils	8.6	9.5	− 43	49	54	− 25
3264	Porcelain electrical supplies	9.1	9.7	− 16	96	115	+ 62
327	*Concrete and Plaster Products*						
3271	Concrete products	70.1	77.2	+ 65	1,153	1,330	+303
3272	Gypsum products	11.4	12.4	+ 65	382	416	+225
3274	Lime	7.2	7.9	+ 13	131	149	+104
3275	Mineral wool	11.9	13.0	+ 46	239	270	+270
3281	Cut-stone and stone products	20.6	20.7	+109	208	236	+247
329	*Non-metallic Mineral Products, n. e. c.*						
3291	Abrasive products	24.0	26.2	+ 25	492	609	+153
3292	Asbestos products	21.3	23.2	+ 7	464	515	+151
3293	Gaskets and asbestos insulations	13.4	14.8	+ 12	180	214	+ 78
3295	Minerals: ground or treated	7.3	8.0	− 11	187	210	+133
3297	Nonclay refractories	8.5	9.3	− 10	195	223	+140
3299	Non-metallic mineral prod., n.e.c.	3.5	3.8	+ 46	61	70	+169

Primary Metals—SIC 33

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT (in thousands) 1958	1960	% Gain 1947-1960	VALUE PRODUCTS SHIPPED ($ millions) 1958	1960	% Gain 1947-1960
33	PRIMARY METALS						
331	*Blast Furnaces and Steel Mills*						
3312	Blast furnaces and steel mills	512.8	543.7	+ 1	..	..	..
3313	Electrometallurgical products	11.8	12.9	+ 34	370	439	+191
332	*Iron and Steel Foundries*						
3321	Gray-iron foundries	112.3	126.6	− 27	1,431	1,708	+ 46
3322	Malleable-iron foundries	20.0	21.8	− 27	212	249	+ 35
3323	Steel foundries	49.1	55.3	− 11	596	705	+ 75
333	*Primary Non-ferrous Metals*						
3331	Primary copper	14.6	15.9	+ 9	..	..	..
3332	Primary lead	3.6	3.8	− 19	..	..	..
3333	Primary zinc	8.9	9.3	− 25	209	226	+ 18
3334	Primary aluminum	17.4	21.3	+ 14	909	1,017	+432
3341	Secondary non-ferrous metals	14.7	16.9	− 7	716	825	+ 14
335	*Non-ferrous Rolling and Drawing*						
3351	Copper rolling and drawing	41.3	42.0	− 23	1,267	1,284	+ 21
3352	Aluminum rolling and drawing	42.4	46.3	+ 69	1,375	1,695	+319
3361	Non-ferrous foundries	62.6	65.9	− 1	888	979	+ 71

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Primary Metals—SIC 33 (Cont'd)

SM Estimates, 1960, of Employment and Value of Products Shipped

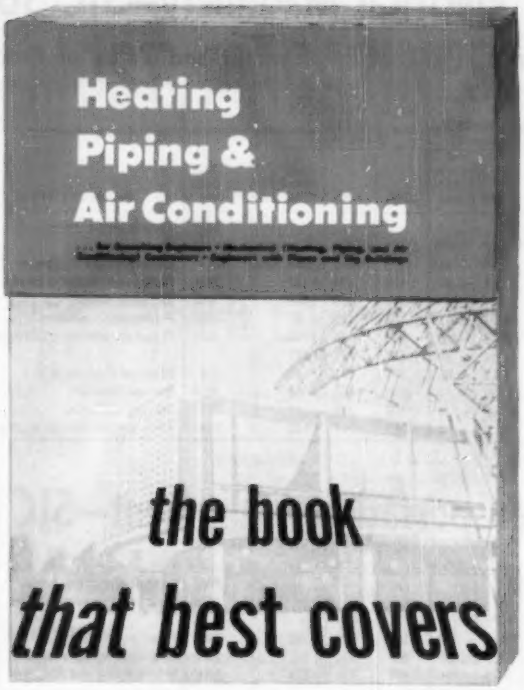
SIC Code No.	INDUSTRY TITLE	EMPLOYMENT (in thousands) 1958	1960	% Gain 1947-1960	VALUE PRODUCTS SHIPPED ($ millions) 1958	1960	% Gain 1947-1960
339	*Primary Metal Industries, n. e. c.*						
3391	Iron and steel forgings	38.3	38.2	+ 4	670	767	+107
3392	Wire-drawing	54.2	57.7	+ 5	1,479	1,636	+ 79
3393	Welded and heavy-riveted pipe	22.6	23.9	+ 92	691	782	+221
3399	Primary metal industries, n. e. c.	28.1	29.8	+ 35	752	854	+151

Fabricated Metals—SIC 34

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT (in thousands) 1958	1960	% Gain 1947-1960	VALUE PRODUCTS SHIPPED ($ millions) 1958	1960	% Gain 1947-1960
34	FABRICATED METAL PRODUCTS						
3411	Tin cans and other tinware	54.8	58.2	+ 24	1,832	1,938	+186
342	*Cutlery, Tools, and Hardware*						
3421	Cutlery	11.9	12.2	− 40	179	187	+ 31
3422	Edge tools	6.8	6.9	− 19	83	85	+ 42
3423	Hand tools, n. e. c.	21.1	21.4	− 40	318	328	+ 22
3425	Hand saws and saw blades	5.5	5.5	− 35	88	94	+ 34
3429	Hardware, n. e. c.	88.8	91.7	+ 18	1,358	1,439	+146
343	*Heating and Plumbing Equipment*						
3431	Plumbing fixtures and fittings	28.2	28.0	− 19	478	483	+ 62
3439	Heating and cooking equip., n.e.c.	68.1	67.7	− 42	1,387	1,409	+ 13
344	*Structural Metal Products*						
3441	Structural and ornamental work	137.2	134.2	+ 70	2,873	2,980	+235
3442	Metal doors, sash, and trim	54.3	53.1	+128	971	962	+313
3443	Boiler shop products	81.3	79.0	+ 16	1,497	1,484	+116
3444	Sheet-metal work	90.4	96.7	+ 34	1,076	1,099	+189
346	*Metal Stamping and Coating*						
3461	Vitreous-enameled products	5.8	6.3	− 48	90	99	+ 25
3463	Metal stampings	118.7	123.8	− 7	1,996	2,260	+ 93
3471	Lighting fixtures	47.3	50.1	+ 7	825	875	+ 80
3481	Wirework, n. e. c.	55.0	57.9	+ 2	667	702	+ 51
349	*Metal Products, n. e. c.*						
3491	Metal barrels, drums and pails	9.1	10.4	− 5	243	270	+ 96
3492	Safes and vaults	3.5	3.8	+ 3	60	66	+124
3493	Steel springs	5.5	5.9	− 24	106	114	+ 23
3494	Bolts, nuts, washers and rivets	53.6	57.3	+ 17	868	938	+102
3495	Screw machine products	32.2	36.1	+ 26	433	491	+121
3496	Collapsible tubes	3.8	4.0	+ 3	45	48	+ 29
3497	Metal foil	7.7	8.8	+ 90	276	325	+481

Machinery (Except Electrical)—SIC 35

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT (in thousands) 1958	1960	% Gain 1947-1960	VALUE PRODUCTS SHIPPED ($ millions) 1958	1960	% Gain 1947-1960
35	MACHINERY, EXCEPT ELECTRICAL						
351	*Engines and Turbines*						
3511	Steam engines and turbines	41.2	44.6	+101	886	952	+606
3519	Internal combustion engines	53.4	58.8	− 10	1,108	1,194	+ 93
352	*Tractors and Farm Machinery*						
3521	Tractors	60.3	59.6	− 23	1,636	1,490	+ 67
3522	Farm machinery (exc. tractors)	75.6	76.4	− 19	1,521	1,696	+ 80
353	*Construction & Mining Machinery*						
3531	Construction and mining mach.	83.1	86.0	0	1,672	1,836	+ 98
3532	Oil field machinery	32.2	33.1	+ 13	588	609	+111
354	*Metalworking Machinery*						
3541	Machine tools	54.2	60.2	− 14	696	914	+ 85
3542	Metalworking machinery	52.0	62.7	+ 14	880	1,231	+137
3544	Special dies and tools	70.5	85.5	− 11	900	1,209	+ 92
3545	Metalworking mach. attachments	40.9	50.3	− 48	506	683	+ 3
355	*Special-industry Machinery, n. e. c.*						
3551	Food-products machinery	27.6	30.8	− 17	455	532	+ 62
3552	Textile machinery	34.2	38.4	− 28	375	430	+ 7
3553	Woodworking machinery	12.2	12.9	− 20	214	226	+ 48
3554	Paper-industries machinery	15.7	17.6	+ 3	309	357	+136
3555	Printing-trades machinery	21.5	23.7	− 5	311	352	+ 77
3559	Special-industry machinery, n.e.c.	51.0	58.9	+ 1	762	897	+ 86
356	*General Industry Machinery*						
3561	Pumps and compressors	60.3	64.2	+ 14	1,121	1,281	+119
3562	Elevators and escalators	9.7	10.1	− 1	193	220	+116
3563	Conveyers	30.9	33.0	+ 34	574	631	+154
3564	Blowers and fans	15.5	16.2	+ 10	264	294	+109
3565	Industrial trucks and tractors	14.8	15.5	+ 12	259	306	+ 86
3566	Power-transmission equipment	49.0	51.8	− 4	738	841	+ 96
3567	Industrial furnaces and ovens	9.2	10.2	+ 62	190	219	+192
3568	Mechanical stokers	.7	.6	− 88	10	10	− 74
357	*Office and Store Machines*						
3571	Computing and related machines	82.3	91.9	+102	1,117	1,317	+387
3572	Typewriters	19.7	20.8	− 22	238	261	+ 70
3576	Scales and balances	5.7	6.3	− 3	82	96	+ 75
3579	Office and store machines, n. e. c.	23.4	27.8	+ 44	380	462	+160
358	*Service and Household Machines*						
3581	Domestic laundry equipment	24.6	25.9	− 9	744	834	+ 88
3582	Laundry and dry-cleaning mach.	6.0	6.7	− 26	117	135	+ 44
3583	Sewing machines	9.6	9.8	− 36	110	124	+ 28
3584	Vacuum cleaners	5.8	6.6	− 66	154	181	+ 13
3585	Refrigeration machinery	111.6	123.2	− 4	..	..	..
3586	Measuring and dispensing pumps	6.2	7.1	− 41	120	149	+ 19
359	*Miscellaneous Machine Parts*						
3591	Valves and fittings, exc. plbg.	75.3	80.9	+ 1	1,246	1,382	+115
3592	Fabricated pipe and fittings	15.1	16.0	+ 51	328	388	+209
3593	Ball and roller bearings	48.4	50.2	− 4	650	731	+100
3594	Industrial patterns and molds	22.1	23.6	+143	263	314	+349



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Electrical Machinery—SIC 36

SM Estimates, 1960, of Employment and Value of Products Shipped

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT (in thousands) 1958	EMPLOYMENT 1960	EMPLOYMENT % Gain 1947-1960	VALUE PRODUCTS SHIPPED ($ millions) 1958	VALUE PRODUCTS SHIPPED 1960	VALUE PRODUCTS SHIPPED % Gain 1947-1960
36	ELECTRICAL MACHINERY						
361	*Electrical Industrial Apparatus*						
3611	Wiring devices and supplies	50.5	52.2	+ 43	836	941	+145
3612	Carbon and graphite products	8.9	9.8	+ 26	155	184	+167
3613	Electrical measuring instruments	44.9	50.4	+141	..	743	+386
3614	Motors and generators	93.5	104.6	− 17	1,394	1,566	+ 60
3615	Transformers	34.5	38.5	− 5	642	750	+110
3616	Electrical control apparatus	80.1	89.3	+ 32	1,375	1,627	+181
3617	Electrical welding apparatus	9.9	11.2	+ 53	248	291	+180
3621	Electrical appliances	39.7	44.9	+ 2	790	904	+ 95
3631	Insulated wire and cable	16.8	18.8	− 7	380	442	+ 52
3641	Engine electrical equipment	39.9	45.5	+ 2	382	733	+106
3651	Electric lamps (bulbs)	21.6	23.4	− 2	418	461	+127
366	*Communication Equipment*						
3661	Radios and related products	308.2	364.7	+104	..	..	..
3662	Electronic tubes	92.3	112.5	+306	1,108	1,406	+1025
3663	Phonograph records	7.4	8.9	− 11	149	186	+ 68
3664	Telephone and telegraph equip.	86.0	102.6	+ 35	..	..	..
369	*Electrical Products, n. e. c.*						
3691	Storage batteries	14.9	16.2	− 2	369	412	+ 38
3692	Primary batteries	8.1	8.8	− 18	138	160	+ 86
3693	X-ray and therapeutic apparatus	5.3	6.0	− 22	96	114	+ 90

Transportation Equipment—SIC 37

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT (in thousands) 1958	EMPLOYMENT 1960	EMPLOYMENT % Gain 1947-1960	VALUE PRODUCTS SHIPPED ($ millions) 1958	VALUE PRODUCTS SHIPPED 1960	VALUE PRODUCTS SHIPPED % Gain 1947-1960
37	TRANSPORTATION EQUIPMENT						
371	*Motor Vehicles and Equipment*						
3713	Truck and bus bodies	19.9	24.2	− 9	306	384	+ 90
3715	Truck and trailers	15.7	17.0	+ 36	335	410	+163
3716	Automobile trailers	20.7	24.1	+161	507	601	+336
3717 m	Motor vehicles and parts	582.2	646.5	C	—	..	..
372	*Aircraft and Parts*						
3721	Aircraft	378.5	309.7	+111	6,482	5,186	..
3722	Aircraft engines	149.8	120.4	+139	3,351	2,675	+475
3723	Aircraft propellers	15.5	10.8	+ 46	235	166	..
3729	Aircraft equipment, n. e. c.	157.6	148.6	+884	2,277	2,140	+1938
373	*Ships and Boats*						
3731	Ship building and repairing	118.3	117.2	− 10	1,570	1,548	+ 93
3732	Boat building and repairing	24.6	27.4	+ 46	320	373	+227
374	*Railroad Equipment*						
3741	Locomotives and parts	18.3	18.2	− 40	408	492	+ 39
3742	Railroad and street cars	24.3	29.2	− 82	569	718	− 1
3751	Motorcycles and bicycles	7.2	8.6	− 45	118	138	− 16

Instruments & Related Products—SIC 38

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT (in thousands) 1958	EMPLOYMENT 1960	EMPLOYMENT % Gain 1947-1960	VALUE PRODUCTS SHIPPED ($ millions) 1958	VALUE PRODUCTS SHIPPED 1960	VALUE PRODUCTS SHIPPED % Gain 1947-1960
38	INSTRUMENTS AND RELATED PRODUCTS						
3811	Scientific instruments	63.5	72.3	+283	948	1,180	+909
3821	Mech. measuring instruments	73.3	86.0	+ 42	1,061	1,329	+214
3831	Optical instruments	7.4	8.9	+ 5	109	134	+198
384	*Medical Equipment and Supplies*						
3841	Surgical and medical instruments	8.7	9.4	+ 34	110	129	+187
3842	Surgical appliances and supplies	25.0	26.8	+ 16	502	597	+132
3843	Dental equipment and supplies	7.2	7.8	− 14	116	141	+ 99
3851	Ophthalmic goods	18.2	20.7	− 8	194	238	+ 97
3861	Photographic equipment	61.2	61.9	+ 11	1,223	1,463	+218
387	*Watches and Clocks*						
3871	Watches and clocks	23.7	23.4	− 32	338	361	+ 6
3872	Watchcases	2.6	2.3	− 69	34	37	+ 16

Miscellaneous Manufactures—SIC 39

SIC Code No.	INDUSTRY TITLE	EMPLOYMENT (in thousands) 1958	EMPLOYMENT 1960	EMPLOYMENT % Gain 1947-1960	VALUE PRODUCTS SHIPPED ($ millions) 1958	VALUE PRODUCTS SHIPPED 1960	VALUE PRODUCTS SHIPPED % Gain 1947-1960
39	MISCELLANEOUS MANUFACTURES						
391	*Jewelry and Silverware*						
3911	Jewelry (precious metal)	21.0	21.6	− 16	326	339	+ 37
3912	Jewelers' findings	5.1	5.3	− 13	72	76	+ 3
3913	Lapidary work	1.9	2.0	+ 18	41	44	+ 47
3914	Silverware and plated ware	13.9	14.3	− 34	196	219	− 1
393	*Musical Instruments and Parts*						
3931	Pianos	5.8	6.6	− 6	80	96	+ 78
3932	Organs	2.3	2.6	+100	56	67	+458
3933	Piano and organ parts	3.3	3.7	+ 16	47	56	+190
3939	Musical instruments, n. e. c.	4.6	5.3	− 2	54	63	+103
394	*Toys and Sporting Goods*						
3941	Games and toys, n. e. c.	42.0	50.5	+ 86	830	649	+257
3942	Dolls	13.9	16.7	+ 70	162	196	+180
3943	Children's vehicles	5.0	6.1	− 31	73	89	+ 4
3949	Sporting and athletic goods	37.1	44.3	+ 49	578	706	+281
395	*Office Supplies*						
3951	Pens and mechanical pencils	11.0	11.4	− 27	146	158	+ 8
3952	Lead pencils and crayons	4.9	5.0	− 21	73	77	+ 71
3953	Hand stamps and stencils	5.4	5.5	+ 20	60	69	+156
3954	Artists' materials	1.6	1.9	+ 36	25	28	+115
3955	Carbon paper and inked ribbons	5.6	6.8	+ 67	121	136	+176
396	*Costume Jewelry and Notions*						
3961	Costume jewelry	25.2	25.5	+ 1	253	271	+ 89
3962	Artificial flowers	6.8	6.8	− 4	65	69	+ 77
3963	Buttons	6.3	6.3	− 41	69	74	+ 23
3964	Needles, pins, and fasteners	17.7	17.9	− 22	221	238	+ 82
3971	Plastics products, n. e. c.	112.9	135.2	+132	1,816	2,190	+361
398	*Miscellaneous Manufactures*						
3981	Brooms and brushes	17.5	18.9	+ 2	285	302	+ 66
3983	Matches	5.1	5.5	− 26	67	73	+ 28
3984	Candles	2.5	2.5	+ 4	34	37	+106
3985	Fireworks and pyrotechnics	1.7	1.8	− 46	17	19	+ 27
3986	Jewelry and instrument cases	6.3	6.6	− 8	60	64	+ 49
3987	Lamp shades	3.9	4.0	− 11	34	36	+ 33
3988	Morticians' goods	17.4	18.5	− 17	238	263	+ 34
3992	Furs, dressed and dyed	2.7	2.4	− 65	27	25	+ 63
3993	Signs and advertising displays	36.1	39.7	+ 39	457	512	+180
3995	Umbrellas, parasols	2.9	3.1	+ 14	36	39	+ 15
3997	Soda fountain, bar equipment	1.0	1.1	− 59	18	20	− 36

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serves all four functions best *because* it serves them all

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A special study made for Sales Management by The Value Line Investment Survey

Rate-of-Growth Analysis of 801 Leading Corporations

A comfortable trap to fall into is to measure your current sales and profit performance against your company's record 10 years ago. On this basis, whether measured in dollars or units, almost every company can point to substantial percentage gains.

The size of the country in terms of people and buying power is increasing rapidly, however. The question is not whether you are doing well when you measure yourself against yourself but whether your growth at least matches or preferably surpasses the rate of growth of the economy as a whole.

We suggest you check these figures on 108 public held companies grouped in 47 industries prepared for Sales Management by The Value Line Investment Survey. Check your own company and industry. Check your competitors. Check other companies whose products approximates yours in prices, or in method of distribution. Which are the leaders and the laggards, in sales and profits, as measured over the past 10 years?

These figures will give you perspective on your own standing.

In the following tabulations the companies listed are, in general, the leading organizations in their respective fields. In most cases they account collectively for the major part of their industries. The proportion necessarily varies, since only publicly owned corporations are included and of these only those in whose stocks the investing public as a whole shows considerable interest.

Vivid Picture of Contrasts

These statistics give a vivid picture of how one industry may fare relatively badly while other industries are moving swiftly ahead. For example, individual companies in the farm equipment and in the railroad equipment industries have done poorly in the past decade. In contrast, the impact of technology has produced some spectacular gains in the electrical equipment industry.

Gains, over the past 10 years, have come to three different companies in separate ways. The spectacular increase in General Dynamics comes from the 1950 Korean war and the subsequent high level of military spending, plus some acquisitions. The growth at Ford Motor can be credited to infusion of new management, while the almost comparable growth at General Motors is testimony to a continuation of outstanding management.

From the point of view of growth in volume and in profits, meat packing continues to be a frustrating industry. Historically, its profit margin is slim. Will packers, in this decade, find the way to break out of this box?

When you are as large as U. S. Steel it is difficult to produce spectacular percentage gains because your base is so high. That is why so many of the smaller steel firms in the past decade have run rings around U. S. Steel in rate of growth and in the 10-year average return on net worth.

The danger of depending largely on a single customer—as Electric Autolite did with Chrysler—is dramatized by the diversification program in the past 10 years which has produced spectacular growth for General Tire.

THE VALUE LINE ORGANIZATION

Studying the past and present and forecasting the future of publicly owned corporations and 62 industries is the business of Arnold Bernhard & Co. Inc., best known for its Value Line Investment Survey which has had a remarkable growth since its founding in 1937.

The Survey brings investors the widest continuous supervision over the field of common stock values in the history of investment services. It goes to more than 25,000 individual and corporate investors who pay $144 a year for the service. Besides the thousands of individual investors, subscribers include banks, brokers, insurance companies, trusts, colleges and investment advisors.

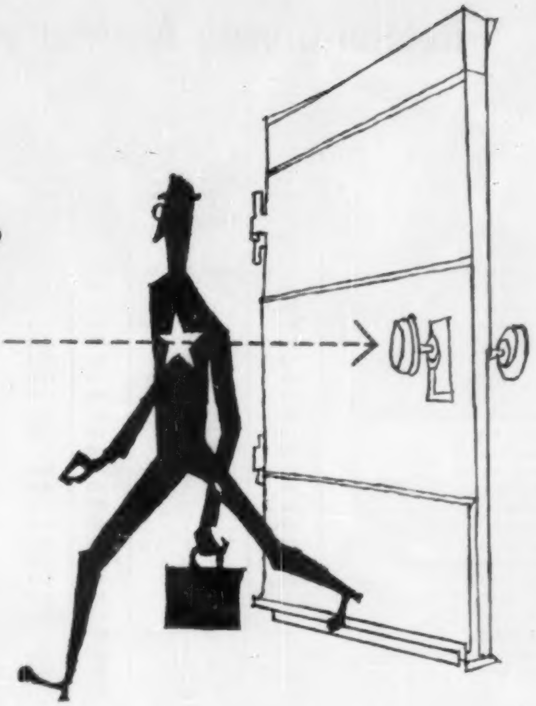
The company also publishes The Over-The-Counter Special Situations Service, designed for the experienced investor-speculator. In addition, the research organization behind these services acts as investment counsellor to individual investors through the company's investment counselling division. The company also manages three mutual investment trusts—The Value Line Fund, The Value Line Income Fund and The Value Line Special Situations Fund, with aggregate assets of the three funds approximating $100 million.

The Bernhard staff comprises 130 persons, of whom over 50 are statisticians, economists and security analysts; they keep 1,200 stocks under year-round supervision and for all corporations they hypothesize future sales, as for the ones involved in this exclusive copyrighted study prepared for Sales Management.

KEY TO INITIALS IN TABLES ON PAGES 128-134

A. Pro Forma
B. Canadian GNP
C. Unadjusted Pro Forma
D. Sales in Sterling
E. 1948-1957 Average Net Worth
F. 1951-1958 Average Net Worth
G. 4-Yr. Average N. W. (1956-59)
H. 5-Yr. Average N. W. (1955-59)
I. 6-Yr. Average N. W. (1954-59)
J. 7-Yr. Average N. W. (1953-59)
K. 8-Yr. Average N. W. (1952-59)
L. 9-Yr. Average N. W. (1951-59)
M. 1957-59 Average N. W.
NA. Not Available
NR. Not Relevant

How to beat the "Star System"



You say you don't think too highly of your advertising agency, but the account man is just great, simply great? He's always there when you want him, knows what you want and how to get any job done and done well?

Swell. Now open your mail.

He's leaving the agency for greener pastures? He's sorry to do this to you, but into every man's life . . .?

So what will you do? Stick with the agency at any cost? (Might save face with management that way.) Stick with the account man and let him peddle your account out of his hip pocket to the first agency that goes for the bait? (You may not think much of the new one either, if you ever get to know them.)

Or will you go back to the fundamentals that might have saved all this uproar in the first place?

If you're looking for one man, hire *him*. If you're looking for an advertising agency, hire a team of men.

An *agency* can insure continuity on your account —not by one man, but by many. An *agency* can assure you of the best thinking and ideas and creative talents of not one man, but many. And an agency—a well-managed one—can insure that your account receives its full measure of support from its complement of talented people in production, art, media, research and allied services.

You've got to look beyond the man directly responsible for your account. Of course he's important —but no more so than the caliber of the agency management behind him, who determine the standards of service that you have every right to expect, both from him and the agency.

Moreover, it is our belief that you have the right to the attention of more than one account man, in order to insure continuity and depth of service. In addition, good ideas should come from many sources within the agency, and the considerable experience of any or all of our men is available for the benefit of all our clients.

You can buy insurance against the inherent weakness of the "star system" if you are so inclined: simply demand the depth of agency service that comes only from a team effort, including participation by the *management* of the team.

From our personal point of view, we think team work is not only more productive for our clients, it's more fun for us.

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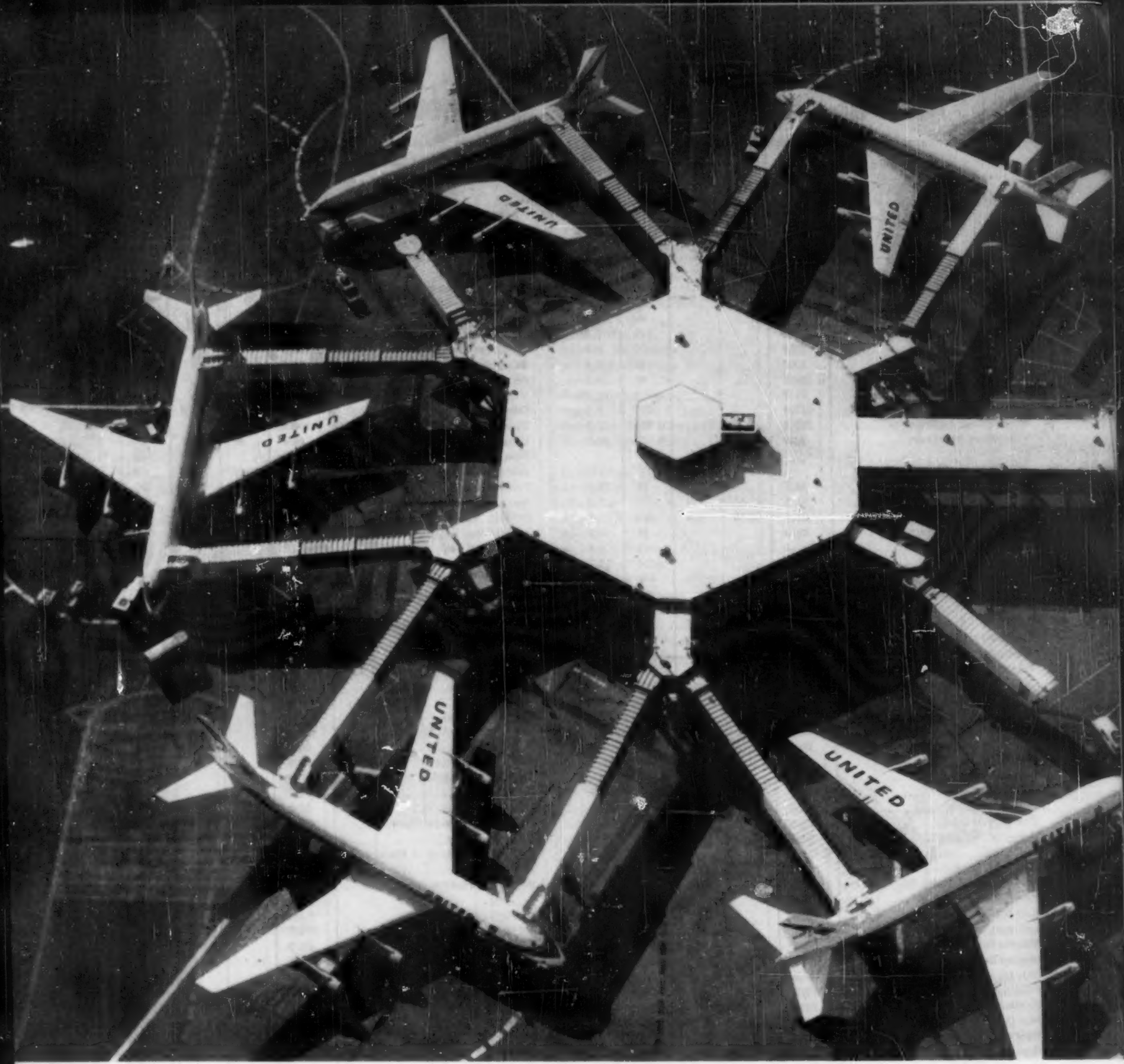
Rate-of-Growth Analysis of 801 Leading Corporations

INDUSTRY Company	Sales 1959 ($ millions)	Gross National Product: Base Period Years (1947-1949*)	Gross National Product: 1959 % Gain over Base Period (91*)	% Company Sales Gain Same Period	10-Year Average Return on Net Worth
AIRCRAFT					
American Bosch Arma	120.0	49-51	66	161	15.0
Beech Aircraft	89.5			275	18.0
Bell Aircraft	128.1			528	12.3
Bendix Aviation	689.7			325	13.4
Boeing Airplane	1,612.2			1,010	25.0
Cessna Aircraft	105.8			612	21.0
Chance Vought	254.7	54	33	72	17.6
Curtiss-Wright	329.2			206	13.0
Douglas Aircraft	883.9			627	13.0
Fairchild Engine	114.1			193	4.2
Garrett Corp.	193.6			1,149	16.4
General Dyamics	1,811.9			4,193	16.0
Grumman	289.0			593	15.0
Lockheed	1,301.6			931	14.0
Martin Co.	523.7			962	18.0
McDonnell Aircraft	435.9			1,925	23.0
North American Aviation	1,044.9			1,216	19.0
Northrop Corp.	282.9			833	21.4
Piper Aircraft	34.3			406	26.0
Republic Aviation	198.1			337	20.0
Rohr Aircraft	191.3	50	70	586	24.0
Thompson Ramo Wooldridge	417.7			332	12.2
United Aircraft	1,081.0			403	13.0
AUTO					
American Motors (A)	869.8			62	7.5
Chrysler	2,643.0			86	9.5
Ford Motor	5,356.9			181	13.7
Ford Motor of Canada (B)	517.2	48-50	106	71	11.9
General Motors	11,233.0			137	20.4
Studebaker-Packard	387.4			−32	Nil
AUTO PARTS					
American Metal Products	57.4			242	15.6
Arvin Industries	66.2			86	14.1
Borg-Warner (A)	649.9			92	12.6
Briggs & Stratton	89.0			286	24.6
Budd Co.	321.7			42	7.6
Clevite Corp.	84.7			200	11.0
Dana Corp.	220.4			105	16.4
Eaton Manufacturing	287.3			161	14.9
Electric Autolite	201.6			−1.0	7.9
Electric Storage Battery (A)	144.6	48	84	10	7.5
Federal-Mogul	127.5			469	16.7
Gould-National Batteries (E)	73.8			35	11.8
Houdaille Industries	81.3			50	9.0
Kelsey-Hayes	201.6			181	12.2
King-Seeley	46.0			113	11.6
Libby-Owens-Ford	306.7			165	22.2
McCord Corp.	43.1			34	8.4
McQuay-Norris Mfg.	25.6			32	7.2
Midland-Ross Corp. (A)	88.7	82	26	17	15.1
Motor Wheel	57.3			10	6.7
Raybestos-Manhattan	88.7			32	9.6
Rockwell-Standard (A)	284.1			164	14.0
Sheller Mfg.	42.9			49	13.9
Smith (A. O.) Corp.	283.7			122	9.9
Stewart-Warner	114.3			68	12.0
Timken Roller Bearing	282.1			140	17.0
Young Spring & Wire	53.8			25	6.9
TRUCK					
Divco-Wayne Corp.	36.0			235	13.4
Fruehauf Trailer	249.0			195	7.0
Gar Wood Industries	25.5			12	2.9
Mack Trucks	297.4			186	8.6
White Motor	333.1			241	9.4
AGRICULTURAL EQUIPMENT					
Allis-Chalmers	539.6			82	9.5
J. I. Case	200.6			48	4.4
Deere	542.5			84	10.8
Cockshutt Farm Equipt.	38.7		133	−1	3.9
International Harvester	1,361.2			86	7.5
Massey-Ferguson (A)	475.5			168	8.2
Minneapolis-Moline	83.8			−18	3.9
Oliver Corp.	114.6			24	5.3
TIRE					
Armstrong Rubber	77.4			195	14.9
Dayco (C)	101.6			296	11.1
Firestone	1,187.8			92	12.9
General Tire	676.9			525	11.1
Goodrich	77.16			88	10.3
Goodyear	1,587.3			136	14.5
Lee Rubber & Tire	52.2			50	7.7
U. S. Rubber	976.8			75	12.1
AIR TRANSPORT					
American Airlines	377.7			313	13.2
Braniff Airways	74.3			405	8.1
Capital Airlines	108.5			388	‡
Continental Airlines	48.0			821	8.8
Delta Air Lines	103.8			686	11.0
Eastern Air Lines	298.3			375	12.2
KLM-Royal Dutch (H)	143.5	52-54	NA	74	9.1
National Airlines	70.9			869	17.0
Northeast Airlines	31.5			611	‡
Northwest Airlines	126.0			270	8.6
Pan American World Airways	386.8			147	6.0
Seaboard & Western	19.9	51	NA	446	‡
Trans World Airlines	348.5			298	6.6
United Air Lines	330.2			306	10.9
Western Airlines	63.3			452	15.3
RAILROAD					
Atchison	633.9			29	6.1
Atlantic Coast Line	196.1			21	4.1
Baltimore & Ohio	395.2			6	3.3
Canadian Pacific (B)	477.8		133	38	4.2
Chesapeake & Ohio	348.0			13	9.6
Chicago Great Western	34.2			3	5.0
Chicago, Milwaukee	24.2			1	2.6
Chicago & North Western	213.4			10	0.4
Chicago, Rock Island	219.5			18	4.7
Delaware & Hudson	68.1			−33	4.1
Delaware, Lackawanna (E)	71.9			−15	2.4
Denver & Rio Grande	75.4			17	9.0
Erie (E)	164.3			−3	5.0
Great Northern Rwy.	254.6			23	4.7
Gulf, Mobile & Ohio	82.1			8	7.8
Illinois Central	271.7			6	5.5
Kansas City Southern	71.0			24	7.0
Lehigh Valley R. R.	84.4			−26	2.6
Louisville & Nashville	229.7			20	6.7
Missouri Pacific	303.4			12	NA
New York Central	689.2			−5	2.3
N. Y., Chicago & St. Louis	150.4			83	8.0
New York, New Haven & Hartford	144.3			−8	1.2
Norfolk & Western	247.0			23	7.0
Northern Pacific	183.6			22	3.1
Pennsylvania R. R.	867.7			−3	2.2
Pittsburgh & Lake Erie	30.6			−23	8.0
Pittsburgh & West Va.	8.0			−5	− 1.7
Reading Co.	107.0			−10	3.4
St. Louis-San Francisco	133.6			17	5.7
Seaboard Air Line	161.4			29	9.8
Southern Pacific	690.3			25	4.7
Southern Rail	271.9			20	6.5
Union Pacific	515.8			24	6.8
RAILROADS—Continued					
Western Maryland	44.9			7	− 5.0
Western Pacific	52.1			27	5.9
Greyhound	321.7			74	15.2
National City Lines	26.5			24	12.5
RAILROAD EQUIPMENT					
ACF Industries	263.6			89	6.0
Alco Products	114.6			−14	7.3
American Brake Shoe	168.0			57	8.5

* Except otherwise indicated, base period is 1947-49 and % gain is 91%

‡Deficit.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Rate-of-Growth Analysis of 801 Leading Corporations

INDUSTRY Company	Sales 1959 ($ millions)	Gross National Product		% Company Sales Gain Same Period	10-Year Average Return on Net Worth
		Base Period Years (1947-1949*)	1959 % Gain over Base Period (91*)		
American Steel Foundries	112.3			63	8.7
General American Transportation	199.7			90	9.9
General Rwy. Signal	21.8			65	12.1
National Malleable	58.4			40	8.0
New York Air Brake	43.0			149	8.6
Pittsburgh Forgings	20.9			−23	8.0
Poor & Co.	30.0			49	9.6
Pullman	399.9			67	8.9
Stanray	21.2			− 2	13.7
Union Tank Car	115.5			583	9.2
Westinghouse Air Brake	200.5			156	11.3
Youngstown Steel Door	22.2			57	14.2
SHIPPING & SHIPBUILDING					
American Export Lines	64.6			29	7.6
Lykes Bros. Steamship	61.1	48-50	79	−21	8.0
McLean Industries (E)	68.1	55-59	NA	NA	3.7
Moore-McCormack Lines	69.8			−15	7.3
U. S. Lines	136.5			64	13.4
Bath Iron Works	98.9			224	11.7
Merritt-Chapman Scott (A)	427.5			276	8.6
Newport News Shipbuilding	191.1			160	10.9
PETROLEUM					
Amerada Petroleum	102.4			77	16.8
Anderson-Prichard	72.6			182	10.9
Arkansas Fuel Oil (J)	168.0	48-50		69	13.1
Ashland Oil & Refining	300.6			362	11.3
Atlantic Refining	541.3			34	9.4
British American Oil	326.3			NA	10.3
Buckeye Pipeline	22.7			168	9.7
Canadian Oil Companies (B)	91.4		133	199	6.9
Champlain Oil & Ref.	72.2			644	13.6
Cities Service	984.9			81.8	10.1
Continental Oil	686.8			135	14.0
Creole Petroleum	955.3			106	34.0
Delhi-Taylor Oil	85.6			NA	11.5
Getty Oil	10.3	50-51		NA	
Gulf Oil	2,713.0			235	13.7
Imperial Oil Ltd. (B)	857.4		133	161	11.0
Interprovincial Pipeline (B)	54.2	51	106	284	18.4
Kery County Land	96.8			390	22.4
Kerr-McGee Oil (A)	132.6			189	9.4
Louisiana Land & Exploration	38.7			242	63.5
Mission Corp.	206.1			209	3.2
Mission Development	158.8	49	NA	181	NA
Ohio Oil	344.8			112	13.5
Phillips Petroleum	1,163.0			198	10.7
Plymouth Oil	89.7			283	18.8
Pine Oil	499.6			90	10.0
Richfield Oil	269.9			146	18.2
Royal Dutch (F)	7,221.1	NR	NR	NA	14.6
Shamrock Oil & Gas	57.1			195	20.7
Shell Oil	1,810.0			139	16.0
Shell Transport & Trading	7,221.1			NA	NA
Signal Oil & Gas "A"	194.3			NA	15.4
Sinclair Oil	1,232.2			116	10.1
Skelly Oil	258.6			66	12.2
Socony-Mobil	3,002.9			189	10.2
South Penn Oil	55.8			81	10.2
Standard Oil (Calif.)	1,564.8			134	14.9
Standard Oil (Ind.)	19,568.0			78	8.4
Standard Oil (Ky.)	305.3			67	16.6
Standard Oil N. J.)	7,910.7			178	14.3
Standard Oil (Ohio)	387.5			92	9.9
Sun Oil	735.7			85	10.4
Sunray-Midcontinent Oil	461.0			636	10.5
Texaco Canada Ltd. (B)	184.4		133	166	17.0
Texaco Inc.	2,678.0			170	14.6
Texas Gulf Producing	17.7			102	17.8
Texas Pacific Coal & Oil	25.9			104	16.0
Tidewater Oil	560.4			63	8.6
Union Oil of Calif.	423.8			123	8.7
CHEMICAL					
Air Products	48			2,286	11.8
Air Reduction	200.6			123	10.2
Allied Chemical	719.7			83	11.7
American Cyanamid	583.6			106	12.4
Atlas Powder	70.7			79	9.7
Canadian Industries Ltd.	149.0			NA	NA
Catalin Corp.	22.3			206	7.3
Chemetron Corp.	130.3	53	31	18	11.5
Columbian Carbon	76.2			86	9.3
Commercial Solvents	70.4			63	8.0
Diamond Alkali	137.9			196	10.6
Dow Chemical	705.4			322	12.6
Dupont	2,144.0			129	17.5
Dupont of Canada Ltd. (B)	90.9	54	39	63	NA
Freeport Sulphur	53.2			123	16.6
Grace, W. R.	489.7	50-52	50	88	7.1
Harshaw Chemical	70.0			196	9.2
Hercules Powder	283.6			123	15.7
Hooker Chemical (A)	148.8	51	46	83	12.7
Interchemical Corp.	122.6			58	11.3
International Salt	31.2			125	15.8
Koppers	240.3			30	7.7
Minnesota Mining	500.7			375	19.1
Monsanto Chemical (A)	611.4			279	12.3
Montecatini	303.3	51	NA	66	NA
Olin-Mathieson Chemical	702.0			NA	10.0
Pennsalt Chemicals	87.5			174	7.4
Pittsburgh Coke & Chemical	70.0			247	7.0
Reichhold Chemical (H)	93.6			215	9.5
Remington Arms	74.6			63	16.2
Rohm & Haas	215.9			283	15.3
Spencer Chemical	57.6			330	16.0
Stauffer Chemical (A)	228.1			139	13.5
Sun Chemical	84.8			64	9.6
Texas Gulf Sulphur	63.6			9	28.8
Thiokol Chemical (A)	190.2			NA	18.8
Union Carbide	1,531.3			164	17.2
United Carbon	62.2			161	12.7
American Agricultural Chemical	91.5	48-50	70	105	11.0
American Potash	84.6			292	9.1
International Minerals & Chemical	112.6			133	8.4
Tennessee Corp.	76.9			111	14.8
Virginia-Carolina Chemical	81.5		71	57	6.5
DRUG					
Abbott Laboratories	122.6			89	14.1
Allied Laboratories	30.2			180	12.6
American Home Products	420.8			203	29.0
Avon Products	141.9			556	28.8
Bristol-Myers	131.5			197	13.2
Carter Products (I)	88.9			NA	37.9
Chesebrough-Pond's	66.3			NA	13.9
Coty, Inc.	22.7			27	3.2
Gillette	209.3			166	40.7
Johnson & Johnson	301.2			99	10.9
Lehn & Fink	32.6			111	11.8
Lilly, Eli	187.0			77	14.0
McKesson & Robbins	676.7			78	10.0
Mead Johnson	89.7			137	14.2
Merck (A)	216.9			86	11.8
Norwich Pharmacal	40.7			270	21.7
Parke, Davis	191.5			145	19.7
Pfizer, Chas.	253.7			465	15.8
Plough, Inc.	34.0			130	15.8
Revlon	124.9	49	88	638	29.0
Rexall Drug	227.0			33	8.3
Schering	80.6			560	24.1
Searle, G. D.	34.5			238	28.3
Smith, Kline & French	134.9			272	33.0
Sterling Drug	209.2			88	21.0
U. S. Vitamin	14.9			282	18.9
Upjohn	166.9	48-49		189	18.2
Vick Chemical	115.2			176	13.0
Warner-Lambert (G)	190.7			NA	22.7
COAL					
Consolidation Coal	282.0			NA	8.0
Eastern Gas & Fuel Associates	157.0			3	6.9

* Except otherwise indicated, base period is 1947-49 and % gain is 91%

Rate-of-Growth Analysis of 801 Leading Corporations

INDUSTRY / Company	Sales 1959 ($ millions)	Gross National Product: Base Period Years (1947-1949*)	Gross National Product: 1959 % Gain over Base Period (91*)	% Company Sales Gain Same Period	10-Year Average Return on Net Worth
Island Creek Coal	96.9			133	11.0
Peabody Coal	109.4			NA	11.0
Pittston (L)	229.4			140	8.9
Truax-Traer Coal	33.9			81	11.1
United Electric Coal	15.8			31	8.6
West Kentucky Coal	31.4			NA	17.6
BUILDING					
Alpha Portland Cement	39.4			118	12.9
American Cement (A) (J)	56.8	53-55	28	17	15.1
American-Marietta	323.6			833	14.2
American Seating	39.4			80	11.3
American-Standard	517.4			86	9.8
Armstrong Cork	290.6			82	9.5
Bestwall Gypsum (M)	39.4			NA	15.0
Canada Cement	21.3			NA	13.4
Carey (Philip) Mfg.	73.2			73	9.5
Carrier Corp.	263.4			414	8.8
Celotex Corp.	76.2			84	9.2
Congoleum-Nairn	47.8			−4	3.2
Corning Glass	204.9			204	19.6
Crane Co.	310.2			56	5.5
Diamond National	223.8			206	9.4
Eagle-Picher	120.9			64	11.3
Evans Products	84.4			337	10.5
Fedders Corp.	55.5			139	14.4
Ferro Corp.	63.9			135	11.2
Flintkote Co.	221.1			196	9.7
General Portland Cement (A)	67.2			177	19.4
Georgia-Pacific	192.0			480	15.8
Giant Portland Cement	15.8			373	20.3
Holland Furnace	30.3			−19	6.8
Ideal Cement	106.5			343	16.2
Johns-Manville	377.6			141	12.9
Kaiser Industries (G)	214.5			NA	8.8
Lehigh Portland Cement	85.7			134	10.1
Lone Star Cement	104.3			142	13.3
Marquette Cement	57.2			212	15.7
Masonite Corp.	71.8			186	12.1
Murray Corp.	55.5			−35	8.9
National Gypsum	226.3			278	12.0
National Homes	94.1			1,400	14.9
National Lead	530.6			62	19.5
Otis Elevator	201.7			149	16.5
Owens-Corning Fiberglass	211.3			382	13.3
Penn-Dixie Cement	51.6			201	14.5
Permanente Cement	77.2			320	18.4
Pittsburgh Plate Glass	606.9			121	13.4
Rheem Mfg.	140.3			149	5.8
Ruberoid	127.3			136	9.6
Screw & Bolt Corp.	22.2			−17	7.7
Sherwin-Williams	275.4			60	10.6
Trane Co.	84.1			272	15.6
U. S. Gypsum	301.0			129	16.0
U. S. Plywood	276.2			317	10.3
Walworth	73.2			97	5.7
Warren Bros.	74.2			224	11.2
Weyerhaeuser Co.	456.3			227	11.4
PAPER					
Abitibi Power & Paper (B)	133.6		106	79	11.1
Brown Co.	58.9			23	6.9
Champion Paper	195.1			132	11.7
Consolidated Paper Ltd. (B)	97.1		106	26	16.4
Crown Zellerbach	527.3			143	12.9
Dominion Tar-Chemical	219.3			NA	9.7
Great Northern Paper	57.7			86	6.5
Hammermill Paper	61.4			223	8.9
International Paper	1,030.2			142	12.6
Kimberly Clark	403.6	49	75	187	10.7
Mead Corp.	323.6			224	10.7
Minnesota & Ontario Paper	87.5			81	9.3
Oxford Paper	72.6			80	7.8
Puget Sound Pulp & Timber	32.3			70	13.7
Rayonier (A)	129.5			51	14.7
St. Laurence Corp.	87.7			NA	17.3
St. Regis Paper	474.4			228	10.2
Scott Paper	297.2			316	13.7
Union Bag-Camp Paper (A)	180.8			127	14.1
West Virginia Pulp & Paper	233.1			161	9.2
HYDRO UTILITY					
American Water Works	48.0			94	5.0
British Columbia Power (B)	96.9		132	168	NA
Idaho Power	33.6			200	7.8
Pacific Power & Light	57.6			273	NA
Puget Sound Power & Light	32.4	53	NA	60	NA
Shawinigan Water & Power (B)	77.1		132	215	NA
Washington Water Power	36.3			118	NA
ELECTRICAL EQUIPMENT					
Admiral Corp.	199.6	47-49	91	164	10.0
Ampex Corp. (I)	68.1			NA	14.0
Amphenol-Borg (A)	56.5			214	11.4
Avco Corp.	306.0			136	6.1
Beckman Instruments	44.9			1,150	8.7
Bell & Howell	61.3			276	9.8
Bulova Watch	66.6			23	8.1
Collins Radio	117.9			1,100	12.8
Cutler-Hammer	114.3			200	16.2
Daystrom	90.6			114	7.5
Dynamics Corp. of America	37.6			242	14.6
Emerson Electric Mfg.	91.3			23	12.2
Emerson Radio	67.4			94	13.0
Fairchild Camera	43.4			386	8.7
General Controls	40.0			827	10.0
General Electric	4,350.0			149	18.8
General Instrument	56.2			218	7.9
General Precision	215.6			696	6.5
General Tire	99.2			84	8.0
Hoffman Electronics	46.4			583	14.5
International Resistance	19.8			274	16.6
International Telephone	765.6			290	6.6
Litton Industries (H)	125.5			NA	15.0
Magnavox	90.6			300	16.0
Mallory, P. R.	86.5			267	12.2
Maytag	123.1			101	21.4
McGraw-Edison	283.9	NA	NA	NA	14.7
Minneapolis-Honeywell	381.4			500	16.2
Motorola	289.5			356	16.6
Odgen Corp. (H)	489.8			NA	14.4
Packard-Bell	46.6			980	18.0
Philco	397.8			67	7.6
Radio Corp.	1,388.4			291	16.3
Raytheon	494.3			739	10.3
Reliance Electric & Engineering	79.9			290	13.8
Robertshaw-Fulton	79.5			163	15.8
Ronson	38.8			54	8.3
Sangamo Electric	52.9			170	11.9
Schick, Inc.	22.4			183	18.5
Singer Mfg. (L)	496.1	51	46	81	6.5
Square D	110.3			196	17.0
Standard Kollsman	73.8			NA	19.7
Sunbeam Corp.	127.5			133	19.1
Texas Instruments (A) (H)	193.2			NA	17.8
Tung-Sol Electric	72.4			424	16.7
Wagner Electric	111.4			59	10.5
Westinghouse Electric	1,910.7			110	8.4
Whirlpool Corp. (H)	430.5			328	12.9
Zenith Radio	260.0			205	16.9
TELEPHONE					
American Cable & Radio	34.0			63	24.8
American Telephone	7,392.0			188	9.3
Bell Telephone of Canada (B)	376.6		133	291	1.6
General Telephone	706.9			613	8.5
New England Telephone & T.	390.0			141	13.0
Pacific Telephone & T.	1,040.7			208	7.6
Southern New England Telephone	127.9			172	13.8
Western Union Telegraph	276.2			43	5.2
BUSINESS MACHINES					
Addressograph-Multigraph	132.1			219	16.5
Burroughs Corp. (K) (A)	388.1			300	10.7

* Except otherwise indicated, base period is 1947-49 and % gain is 91%

Rate-of-Growth Analysis of 801 Leading Corporations

INDUSTRY Company	Sales 1959 ($ millions)	Gross National Product: Base Period Years (1947-1949*)	Gross National Product: 1959 % Gain over Base Period (91*)	% Company Sales Gain Same Period	10-Year Average Return on Net Worth
Haloid-Xerox	31.7			306	10.7
International Business Machines	1,309.8			702	17.2
Moore Corp., Ltd.	144.3			187	17.6
National Cash Register	419.1			165	13.9
Pitney-Bowes, Inc.	57.5			248	15.5
Royal McBee (A)	104.0			130	10.8
Smith Corona-Marchant (A)	90.4			135	10.6
Sperry Rand	1,17[illegible].1			364	15.2
Underwood Corp.	75.4			42	‡
METAL FABRICATING					
Bohn Aluminum	45.7			35	5.9
Birdgeport Brass	173.1			172	12.2
Continental Copper & Steel	53.7			261	15.3
Fansteel Metallurgical	31.0			288	13.4
General Cable	170.4			124	12.2
International Silver	57.1			−4	8.7
Mueller Brass	68.7			86	11.6
Revere Copper & Brass	245.8			78	13.2
Scovill Mfg.	152.7			104	5.8
Vanadium	70.0			304	10.9
STEEL					
Acme Steel	133.8			142	12.2
Algoma Steel	162.7			986	13.0
Allegheny Ludium Steel	230.7			104	10.9
Armco Steel (A)	1,022.4			110	13.7
Atlas Steels, Ltd. (B)	45.0		133	168	14.1
Bethlehem Steel	2,855.7			71	11.3
Bliss & Laughlin	52.7			183	18.1
Carpenter Steel	68.9			184	13.2
Colorado Fuel & Iron	280.3			142	7.2
Copperweld Steel	138.4			146	9.5
Crucible Steel	219.3			93	8.6
Detroit Steel	116.7			320	12.9
Dominion Foundries	39.3			890	12.6
Dominion Steel & Coal	11.0			11	5.8
Eastern Stainless Steel	67.0			600	12.7
Firth-Sterling	17.2	48		94	4.6
General Refractories	56.1			90	12.8
Granite City Steel	104.4			335	13.7
Harbinson-Walker Refractories	87.9			97	13.0
Harsco Corp.	94.0			865	16.2
Inland Steel	705.1			87	13.9
Interlake Iron	113.9			101	7.7
Jones & Laughlin Steel	785.7			94	8.3
Kaiser Steel	201.9			278	9.5
Lone Star Steel	112.9	48		584	16.4
Lukens Steel	83.1			47	12.6
McLouth Steel	178.8			587	15.9
National Steel	737.0			86	11.8
Page-Hersey Tube	8.4			127	16.1
Phoenix Steel	60.6			44	9.6
Pittsburgh Steel	149.9			69	5.6
Republic Steel	1,076.8			57	11.8
Sharon Steel	119.4			20	8.1
Steel Co. of Canada	321.5			192	12.7
U. S. Pipe & Foundry	119.9			204	11.4
U. S. Steel	3,643.0			58	9.9
Wheeling Steel	207.3			44	7.6
Woodward Iron	54.2			138	12.1
Youngstown Sheet & Tube	808.1			79	9.0
NON-FERROUS METALS					
Aluminium, Ltd.	448.7			140	9.6
Aluminum Co. of America	858.5			122	11.5
American Metal-Climax (A)	888.5	50-59	NA	NA	16.2
American Smelting	390.4			67	9.3
American Zinc, Lead & Smelting	50.6			41	11.0
Anaconda	632.7			66	7.5
Bunker Hill	46.5			48	8.2
Cerro de Pasco (A)	158.4	50	68	354	5.6
Consolidated Mining & Smelting	110.1			−6	18.2
Copper Range	41.7			175	10.2
Falconbridge Nickel Mines, Ltd.	64.2			529	18.9

INDUSTRY Company	Sales 1959 ($ millions)	Gross National Product: Base Period Years (1947-1549*)	Gross National Product: 19.9 % Gain over Base Period (91*)	% Company Sales Gain Same Period	10-Year Average Return on Net Worth
Faste Mineral	20.2			477	14.0
Howe Sound	83.7	NR	NR	NR	NR
Hudson Bay Mining & Smelting	45.9			26	23.0
Inspiration Consolidated Copper	29.9			101	11.6
International Nickel	450.8			151	17.4
Kaiser Aluminum	435.6			445	13.3
Kennecott Copper	437.2			44	13.5
Lithium Corp.	10.6			2,000	8.1
Magma Copper	42.1			855	6.8
Molybdenum Corp.	21.4	NR	NR	NR	NR
New Jersey Zinc	NA			NA	8.0
Newmont Mining	290.7			NA	NA
Noranda Mines, Ltd. (B)	33.9		140	118	21.0
Phelps Dodge	288.6			27	15.6
Reynolds Metals	409.3			288	14.7
Rhodesian Selection Trust (D)	67.6			207	NA
Roan Antelope (D)	49.6			229	27.2
St. Joseph Lead	86.2			8	13.3
U. S. Foil	181.3			NA	NA
U. S. Smelting	27.3			−33	2.2
Ventures, Ltd.	46.8	54	NR	77	NR
MINING					
Cleveland Cliffs	83.8			7	9.7
Dome Mines	5.9			−3	9.5
Great Northern Iron Ore	4.3			7	20.7
Hanna, M. A.	16.8			NA	NA
Hollinger Consolidated Gold	9.4			NA	6.8
Homestake Mining	20.1			43	17.4
Kerr-Addison Gold Mines, Ltd.	19.1			165	39.7
McIntyre-Porcupine Mines, Ltd.	9.6			28	7.0
MACHINERY					
American Chain & Cable	113.0			90	11.6
American Machinery & Foundry	283.9			1,134	12.2
American Machine & Metals	51.0			209	17.0
American Meter	38.1			123	14.2
Babcock & Wilcox	332.1			138	10.9
Baldwin-Lima-Hamilton	137.2			21	4.7
Black, Sivalls & Bryson	41.8			146	9.3
Blaw-Knox (A)	161.3			80	11.0
Bliss, E. W. (A)	74.6			88	8.8
Bucyrus-Erie	75.4			21	8.8
Canada Iron Foundries, Ltd. (B)	106.7		133	248	12.0
Caterpillar Tractor	742.3			236	14.9
Chicago Pneumatic Tool	83.0			170	14.4
Clark Equipment	208.2			243	15.4
Combustion Engineering	325.9			299	10.4
Continental Motors	139.9			67	8.8
Cooper-Bessemer	86.9			107	13.5
Dominion Bridge (B)	123.4	51-53	48	65	12.4
Draper Corp.	51.2			NA	7.5
Dresser Industries	232.3			199	12.9
Food Machinery & Chemical	342.9			325	11.6
Foster Wheeler	163.7			144	7.2
Gardner Denver	74.8			303	16.0
Grinnell Corp.	200.5	50	68	106	11.4
Haliburton Oil Well	192.5			276	17.6
Harris Intertype	63.9			132	11.5
Ingersoll-Rand	161.5			82	21.8
Joy Manufacturing	91.1			64	12.6
Koehring Co.	60.9			233	8.7
Link Belt	152.6			63	11.1
Manning, Maxwell & Moore	46.3			107	8.5
Mergenthaler Linotype	37.8			250	16.4
Mesta Machine	24.8			23	6.3
F. E. Myers & Bro.	70.2			80	16.9
Outboard Marine	171.6			468	18.7
Reed Roller Bit	28.2			40	7.9
Rex Chainbelt	66.4			184	11.2
Ritta Co.	27.2			192	12.5
Rockwell Mfg.	122.7			90	14.3
Symington-Wayne	47.3			205	8.8
Textron, Inc.	308.2			147	4.7
Torrington Co.	52.0			68	17.5
Udylite Corp.	53.5			134	12.8

* Except otherwise indicated, base period is 1947-49 and % gain is 91%

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Rate-of-Growth Analysis of 801 Leading Corporations

INDUSTRY / Company	Sales 1959 ($ millions)	Gross National Product: Base Period Years (1947-1949*)	Gross National Product: 1959 % Gain over Base Period (91*)	% Company Sales Gain Same Period	10-Year Average Return on Net Worth
United Engineering & Fdry.	61.1			17	14.9
U. S. Industries	86.6			64	4.9
White (SS) Dental Mfg.	32.1			67	6.9
Worthington Corp.	180.3			104	11.8
Yale & Towne	144.1			135	7.4
MACHINE TOOL					
Black & Decker	82.8			127	14.8
Brown & Sharpe Mfg.	33.7			52	8.8
Bullard Co.	15.9			70	6.4
Carborundum Co.	114.1			129	10.0
Cincinnati Milling Machine	106.4			221	9.8
Ex-Cell-O	112.8			329	17.0
Kearney & Trecker	16.6			34	3.9
Monarch Machine Tool	9.2			22	9.9
National Acme	22.7			47	11.4
Nicholson File	27.3	54	32	81	10.0
Simonds Saw & Steel	61.4			125	13.0
Stanley Works	105.7			73	8.4
Starrett, L. S.	12.8			60	10.5
Sundstrand Corp.	81.6			613	15.1
Union Twist Drill	17.1			87	8.4
United-Greenfield Corp. (A)	48.2	52	38	−5	9.4
Van Norman Industries	44.5			232	2.1
Warner & Swasey	58.7			298	12.3
FOOD PROCESSING					
Beech Nut-Life Savers, Inc. (A)	115.6			42	12.6
California Packing	382.5			110	9.2
Campbell Soup	496.5			126	13.3
Consolidated Foods	380.6			157	7.1
Corn Products Co. (H) (A)	676.4	53	31	41	12.1
General Foods	1,087.1			143	14.9
Gerber Products	131.1			256	18.3
Hawaiian Pineapple	91.9			131	6.3
Heinz, H. J.	340.0			86	7.5
Libby, McNeill & Libby	296.2			100	7.0
Minute Maid Corp.	99.1			NA	7.8
Penick & Ford	56.9			39	16.8
Staley (A. E.) Mfg.	168.7			33	8.4
Standard Brands	521.8			92	8.9
Stokely-Van Camp	158.2			60	7.7
United Fruit	312.9			NA	10.8
MEAT PACKING					
Armour	1,883.8			2	4.2
Cudahy Packing	354.1			−38	1.6
Morrell (John)	436.3			50	5.4
Swift & Co.	2,475.5			9	5.0
Wilson & Co.	665.5			9	6.1
DAIRY					
Arden Farms	322.6			276	8.5
Beatrice Foods	433.1			121	10.4
Borden Co.	941.3			51	10.9
Carnation Co.	390.3			57	11.5
Fairmont Foods	97.3			−12.7	4.8
Foremost Dairies	440.1			27	17.6
National Dairy Products	1,606.7			73	17.6
Pet Milk	190.3			33	7.1
MILLING					
Allied Mills	112.8			43	8.3
General Mills	546.0			32	11.7
Kellogg Company	242.4			143	30.0
Pillsbury Company	350.7			75	7.4
Quaker Oats	322.2			52	13.0
Ralston-Purina	520.6			131	13.1
BAKING					
American Bakeries	159.2			54	12.9
Continental Baking	385.9			148	13.2
General Baking	189.2			59	7.4
National Biscuit	429.0			51	11.9
Sunshine Biscuits	188.9			90	13.1
United Biscuit	137.6			63	8.3
Ward Baking	102.0			28	8.7
SUGAR					
Amalgamated Sugar	60.6			47	9.0
American Crystal Sugar	53.5			83	6.0
American Molasses	50.4			105	7.0
American Sugar Refining	335.8			22	7.0
Central Aguirre Sugar	17.2			42	8.0
Cuban-American Sugar	56.9	NR	NR	NR	7.7
Great Western Sugar	104.4			74	8.0
Holly Sugar	69.2			74	9.0
National Sugar Refining	189.0			40	6.0
South Porto Rico Sugar	35.8	NR	NR	NR	10.0
CONFECTIONERY					
American Chicle	68.7			85	20.0
Hershey Chocolate	167.4			16	17.5
Wrigley (Wm.)	92.6			54	15.4
SOFT DRINK					
Canada Dry	98.6			102	9.8
Coca-Cola	342.3			50	16.0
Dr. Pepper	12.4			66	12.2
Pepsi-Cola	157.8			218	17.8
Royal Crown Cola	21.0			91	20.0
VEGETABLE OIL					
Anderson, Clayton	737.1			33	8.3
Archer-Daniels-Midland	239.4			†	6.9
Centra Soya	265.0			207	11.4
Colgate-Palmolive	582.0			91	10.0
Glidden & Co.	195.8			7	9.5
Procter & Gamble	1,368.5			110	14.9
Spencer Kellogg	130.5			−9.2	3.4
DEPARTMENT STORE					
Allied Stores	679.5			67	8.2
Associated Drygoods	290.1			99	9.2
Bullock's Inc.	155.4			40	9.5
Federated Department Stores	759.9			126	13.5
Gimbel Bros.	404.8			37	7.7
Interstate Dept. Stores	90.3			42	8.7
Macy, R. H.	471.8			56	6.5
Marshall Field	234.3			32	7.6
May Dept. Stores	684.0			47	10.0
Mercantile Stores	167.8			46	9.5
Penney, J. C.	1,437.5			70	18.3
Alden's Inc.	114.7			46	9.1
Montgomery Ward	1,222.6			6	6.7
National Bellas Hess	47.2			75	12.5
Sears, Roebuck	4,036.2			88	14.6
Spiegel, Inc.	216.7	56	15	56	8.8
Barker Bros.	96.8			219	6.3
Best & Co.	41.9			12	8.9
Bond Stores	84.8			2	6.6
Lane Bryant	76.8			53	11.8
Lerner Stores	189.0			60	8.8
Western Auto Supply	265.4			114	10.2
VARIETY STORE					
Grant, W. T.	480.0			107	9.4
Green, H. L.	133.3			36	9.0
Kresge, S. S.	404.9			43	7.7
Kress, S. H.	154.4			−4	8.3
McCory-McLellan Stores	171.6			16	9.6
Murphy, G. C.	238.8			80	12.2
Neisner Bros.	69.7			26	5.9
Newberry, J. J.	138.0			83	9.9
Woolworth, F. W.	916.8			50	9.8
Peoples Drug Stores	87.2			84	10.1
United Whelan Corp.	45.2			−41	4.4
Walgreen Co.	285.1			78	12.3
GROCERY STORE					
American Stores	880.5			118	11.4
Colonial Stores	460.0			116	14.1
Dominion Stores (B)	368.4		133	545	19.4

* Except otherwise indicated, base period is 1947-49 and % gain is 91%

†Decline.

Rate-of-Growth Analysis of 801 Leading Corporations

INDUSTRY Company	Sales 1959 ($ millions)	Gross National Product		% Company Sales Gain Same Period	10-Year Average Return on Net Worth
		Base Period Years (1947-1949*)	1959 % Gain over Base Period (91*)		
First National Stores	531.6			86	11.3
Food Fair Stores	780.0			549	17.4
Grand Union	603.5			330	12.4
Great A. & P.	5,048.6			83	11.4
Jewel Tea	482.9			206	13.2
Kroger Co.	1,911.9			140	13.4
Lucky Stores	178.7	49-51	66	440	15.0
National Tea	829.5			226	12.2
Penn Fruit	166.9			377	10.2
Safeway Stores	233.3			116	11.6
Winn-Dixie Stores	606.4			887	24.0
TEXTILE					
American Enka	109.2			163	7.5
American Viscose	239.8			13	7.3
Beaunit Mills	124.1			139	8.8
Bigelow-Sanford	72.0			1	2.9
Botany Industries	78.7	54	32	236	NA
Burlington Industries	906.5			214	7.2
Canadian Celanese, Ltd.	NA			NA	10.3
Cannon Mills	207.1			39	8.8
Celanese	265.2			37	8.3
Cluett Peabody	113.9			54	8.8
Collins & Aikman	49.0			98	2.7
Cone Mills	190.3			67	6.5
Dan River Mills	173.7	49	98	167	6.4
Dominion Textile, Ltd. (B)	97.4	55	20	−16	5.0
Industrial Rayon	62.1			22	8.8
Lowenstein (M) & Sons	290.7			149	7.8
Manhattan Shirt	33.5			40	6.5
Mohasco Industries (A)	101.2			−21	NA
Pepperell Mfg.	93.0			28	6.8
Simmons Co.	132.6			11	9.6
Stevens, J. P.	459.4			78	6.3
United Merchants	414.7			105	10.2
West Point Mfg.	145.6			53	10.7
SHOE					
Brown Shoe (A)	276.8			82	12.8
Endicott-Johnson	148.1			−4	3.7
Genesco, Inc. (A)	276.4	48-50		97	11.8
International Shoe (A)	283.3			22	8.4
Melville Shoe	151.7			80	17.7
United Shoe Machinery	97.3			33	7.8
ENTERTAINMENT					
American Broadcasting-Paramount (K)	287.9			NA	9.7
American Optical	89.0			55	5.4
Brunswick Corp.	278.1			849	11.2
Columbia Broadcasting	444.3			49	17.9
Columbia Pictures	115.8			104	6.6
Decca Records	79.2			209	13.6
Disney (Walt) Productions	88.4			924	13.3
Eastman Kodak	914.1			138	16.4
Loew's Theatres	46.1			NA	NA
Metro-Goldwyn-Mayer	131.0			NA	NA
National Theatres & Television (L)	66.7			NA	9.5
Paramount Pictures	111.9			NA	7.9
Polaroid Corp.	89.9			1,922	24.0
Republic Pictures	28.3			UC	18.8
Stanley Warner (I)	123.9	NA	NA	NA	4.6
Technicolor	27.3			42	12.4
Twentieth Century-Fox (L)	118.8			38	6.1
U. S. Playing Card	21.5			19	14.5
Warner Bros. Pictures	87.1			NA	NA

INDUSTRY Company	Sales 1959 ($ millions)	Gross National Product		% Company Sales Gain Same Period	10-Year Average Return on Net Worth
		Base Period Years (1947-1949*)	1959 % Gain over Base Period (91*)		
TOBACCO					
American Tobacco	1,611.4			37	11.5
Imperial Tobacco of Canada, Ltd. (B)	29.3		133	225	17.9
Liggett & Myers	554.9			2	10.0
Lorillard (P.)	490.9			249	12.6
Philip Morris	460.5			93	9.6
Reynolds Tobacco	1,286.9			78	14.1
Bayuk Cigars	52.2			48	5.5
Consolidated Cigar	90.0			116	10.3
General Cigar	61.4			70	6.5
American Snuff	23.5			91	10.6
Helme, Geo. W.	17.4			91	9.0
U. S. Tobacco	32.3			60	11.1
Universal Leaf Tobacco	215.5			184	11.1
BREWING					
Anheuser-Busch, Inc.	298.0			148	7.5
Canadian Breweries	212.0			192	12.0
Drewry's, Ltd. U. S. A. Inc.	31.3			247	14.3
Falstaff Brewing	111.6			244	15.7
International Breweries (G)	17.0			NA	12.5
Pabst Brewing	148.5	NR	NR	NR	NR
DISTILLING					
American Distilling	80.7			78	6.0
Distillers Corp.-Seagrams	731.4			5	10.3
National Distillers & Chemical Products	575.6			56	8.1
Publicker Industries	118.3			−20.3	†
Schenley Industries	400.0			−6	6.4
Walker (Hiram)	412.1			37	12.3
CONTAINER					
American Can (A)	1,107.4			131	8.2
Anchor Hocking Glass	141.1			131	13.2
Container Corp. (H) (A)	322.3	58	21	18	14.1
Continental Can (A)	1,148.5			187	9.5
Crown Cork & Seal	123.2			42	3.6
Federal Paper Board (A)	78.1	54	32	27	12.7
Fibreboard Paper Products (H-A)	119.8			58	9.9
KVP Sutherland Paper (A)	86.5			92	9.7
Lily Tulip Cup	89.4			248	15.1
National Can (A)	101.8			196	3.6
Owens-Illinois Glass (A)	582.7			109	13.5
Sealright-Oswego Falls	51.5			112	10.7
Standard Packaging (A)	87.9	53	13	53	9.4
Thatcher Glass Mfg.	48.9			179	12.3
ADVERTISING AND PUBLICITY					
American Bank Note	24.5			26	6.0
Conde Nast	37.3			79	NA
Crowell-Collier	35.5			−43	5.1
Curtis Publishing	182.5			78	13.8
General Outdoor Advertising	41.8			66	10.1
Hall (W. F.) Printing	NA			32	9.5
McCall Corp.	74.5			117	8.1
McGraw-Hill Publishing	105.8			153	27.8
Meredith Publishing	81.8			141	18.3
Time Inc.	271.4			114	22.4
PERSONAL SERVICE					
ABC Vending Corp.	86.1			134	14.0
American Express	67.1			184	12.1
Automatic Canteen	140.5			577	15.4
Hertz Corp. (I)	102.9	54-56	22	174	20.3
Hilton Hotels	219.0			356	5.3
Sheraton Corp.	170.8			422	5.9
Webb & Knapp (J)	50.0	NR	NR	NR	6.8

* Except otherwise indicated, base period is 1947-49 and % gain is 91%

†Decline

See pages 94, 95

16 Case Histories on Use of Plant and Employment Data

(continued from page 43)

used every year to analyze the potential in each district. Our sales districts are built up along county lines. By using county SIC information available through Government and industrial business publications, we are able to compare potential with actual performance. These potential figures are also used in the preparation of quotas for each of the districts and also for analyzing manpower requirements by district.

We are often asked to prepare a study on a particular industry or a particular geographic area. Here again our basic approach is to use our Univac to give us our current status in the industry or area being analyzed. We then compare our present customers with all the known producers in this particular industry or the geographic area. For this type of study we use the SIC in specialized industry directories, state directories, etc.

Yardsticks for Evaluating SIC

SIC as applied by Foote Bros. Gear & Machine Corp.

To reap the most value from statistics by SIC, we first established a yardstick for each industry:

1. We first established a weight for each SIC. We coded a year's sales by SIC to determine the relative value of each industry. Since our sales are not necessarily representative of our industry we surveyed a representative sample of U.S. industry to learn the strengths and weaknesses of our sales efforts within each significant purchasing industry. To enlarge our sample and confirm the market research findings, we asked our field salesmen to complete a similar survey of their area. Participation by the salesmen gave more credibility to our findings.

2. We determined the total potential for the entire industry.

3. We were thus able to arrive at a breakdown of the total market potential for each of the SIC groups.

Foote Bros. distributes its products directly to the large original equipment manufacturers, who look to our sales engineers for engineering service in the design of their power transmission drives, and to users (or consumers) as well as OEM's through our industrial distributors, who offer off-the-shelf service as our product line. Our studies of the original equipment market gave us reliability for a 4-digit SIC breakdown, whereas we were limited to a 2-digit breakdown for the user industries, whose purchases are either for replacement or in-plant use.

From our market studies were developed purchase indices which are the relationships between the sales of a given industry and its purchases of speed reducers and gearing:

SIC	OEM Ind.	Sales* (000)	Est. Purch. (000)	Purch. Index
3531	Construction Machinery	$1,989	$10.0	.005
3532	Mining Machinery	309	1.2	.004
3535	Conveyors & Conveying Equipment	357	2.5	.007

Since there was not a direct relationship between the sales of user industries and their purchases of speed reducers, a logical relationship seemed to follow with their expenditures for plant and equipment. Our index was therefore developed for each 2-digit SIC group on expenditures. For example:

SIC	User Ind.	Capital** Spending (millions)	Purchases (millions)	Purch. Index
20	Food and Kindred Products	$742	$0.445	.006
22	Textile Products	408	0.816	.002

*Refer to Sales Management's estimates for 1958.
**McGraw-Hill Publishing Company's "Business Plans for New Plants and Equipment."*

(continued on page 138)

(continued from page 136)

Now if we can reasonably estimate sales of OEM industries for the coming year and capital spending for user industries, we can make a reliable forecast of market potential for Foote Bros. products in the coming year; we can set our objectives and a marketing plan to accomplish these goals.

Using McGraw-Hill estimates for past and future capital spending and correlation techniques, we developed a formula for projecting the expected sales for each 4-digit OEM industry. We used McGraw-Hill spending plans for our estimate of the user market.

With these data Foote Bros. has marketing facts to develop the general marketing plan. Important to this is the geographical or marketing area assigned to each sales representative. In delineating sales territories, the following factors were given consideration:

1. Number and location of major accounts.

2. Size of accounts and anticipated work load.

3. Number of industrial distributors serving the area.

4. Geography of the area and the travel time required.

5. Estimated market potential for all products within the area by SIC.

6. Number of present customers and their sales volume for the previous years.

7. Field forecast.

In the development of a marketing plan for sales coverage, no one of these factors could be used as the determinant, inasmuch as each complements the other. Each territory has many things in common, even though some may have more opportunity for growth than others.

With the estimated national potentials established by SIC industry groups, we wanted to distribute these totals throughout the U. S. to give us the geographical dispersion. Using Sales Management data, we weighted each industrial trading area in accordance with the number of employees in OEM SIC groups by four digits and user industry groups by two digits. Industrial trading areas were then pieced together to form equitable sales territories for which we now had a measure of potential.

Logically, each sales engineer, being assigned his share of the market potential, will ask which by name are the accounts comprising the total. Since most directories identify manufacturing companies with the Standard Industrial Classification, the Foote Bros. market research department, working with our field sales representatives, uncovers many prospects worthy of sales effort. Since the time of our sales engineers is limited, they will refer many of these accounts to the industrial distributors who are working closely with them.

In summary, the SIC allows Foote Bros. Gear to:

1. Determine the market potential for its products in the coming year.

2. Measure our company performance by SIC group.

3. Evaluate sales penetration by geographical marketing area.

4. Direct the marketing plan to focus our attention on important industry segments.

5. Assist our industrial distributors to do a selective selling job.

'We Use Employment in Each SIC Group'

SIC as applied by Signode Steel Strapping Co.

We have developed the estimated potential for the use of our products for each SIC classification. In allocating this potential as between sales territories, we use the employment of each SIC group within the area multiplied by the national potential per national employee. We originally did this on a 2-digit basis, then expanded it to a 3-digit basis, and for about the past five years have been carrying on these calculations on the 4-digit basis.

In order to facilitate this type of calculation, for the past several years we have developed and maintained our own "Signode Industrial Directory" of U.S. manufacturing plants with 20 or more employees. Each such individual plant is listed on an IBM card showing name of company, city, county, and state, 4-digit SIC class, approximate employment and postal zone. For use in estimating potentials by area, we have sorted these cards by industry, and then run each group through the calculating punch multiplying the approximate employment of the plant by the dollar per employee potential figure applicable to the 4-digit SIC group, and we have punched the resulting potential estimate into the card. For any proposed or actual sales territory we simply group the cards by area or proposed area and add the potentials punched on them.

Perhaps an even more important use of our Signode Industrial Directory is that we have listed separately about 20% of the plants which have approximately 80% of the potential for our products. This list is broken down by sales territory and submitted to the field periodically so that the salesmen can check each of the plants listed to be sure that they have not overlooked any prospective purchaser of steel strapping of worthwhile size.

'The Question Arose in Our Advertising Department . . .'

SIC as applied by Handy & Harman, makers of silver hardware

Two years ago we became interested in SIC. About this time the question arose in our advertising department as to where to direct our advertising efforts for a basic form of fine silver.

As a first step we obtained state directories which commonly follow the SIC structure, and asked our accounting department to run off a tape (on our punch card equipment) showing the names, addresses, and purchases of the product. Then we coded these customers, according to the SIC, and so were able to determine what industries constituted the principal markets. This information was, of course, very valuable to our advertising people because most business magazines now have their subscribers coded by SIC and the problem of selecting the proper ones for our ads was solved.

Also about this time the question arose in our company as to whether or not we should increase our production facilities on a complex form of a basic product. For many years we had been selling this product line to customers who sought us out and asked if we could supply them. We had made no really serious effort to sell it, but still our volume was increasing. Consequently, we wondered how much we could sell if we tried.

Again we coded our customers by SIC, and ran a mail survey, making two mailings. We covered 15 four-digit industries, and 21½% of the companies we wrote to replied. Meas-

ured by production workers, the companies that replied represented 26.3% of the industries.

These replies furnished us a good sample, and so we were able, with the aid of published market data, to calculate what the total market was and what share we had, not only nationally but by individual sales territories. We also secured an excellent list of prospects. Thus we obtained information that helped us decide what production equipment we needed and where we should direct our sales effort.

In view of the results achieved thus far, we decided to punch in on all of our customer cards their SIC code and their employment. We found about half of our customers in the state directories, and sent the balance questionnaires asking for their principal product or service, and their employment. About half of these companies answered the questionnaires. We gave the names and addresses of those that didn't answer to our salesmen, and asked them to get the information we needed on their next regular calls.

The two products mentioned above are relatively minor ones in our overall picture. So we decided to apply these techniques to one of our major products. We produce a line of industrial products marketed primarily through distributors. A preliminary investigation revealed that large numbers of the metalworking industries use these products, and to survey them all was beyond our means. So, in consultation with our distributors, we selected 14 user industries.

We then went to the market research division of a publishing house and asked for a survey of the 14 markets as defined by 4-digit SIC codes. The survey was to determine the total markets. Next, we asked all of our distributors to give us their sales in each of the 14 industries.

From the results of the market survey, the information received from the dealers, and our own records, we were able to calculate the total market for each of the 14 industries in each of our salesmen's territories, and what share we had. We are now in the process of calculating the same information for our distributors.

Incidentally, in the market survey, responses were received from 67.6% of the firms approached, and these firms employed 73.6% of the total employees in these industries.

'To Select Recipients of Our Questionnaire . . .'

SIC as applied by Aeroquip Corp., makers of hose, hose fittings, load control & tie down equipment

We have a sales development program which includes the names of over 31,000 men and 8,300 plants that influence the purchase of hose, fittings and self-sealing couplings. We obtained this information through a questionnaire. We received a 68% response to this questionnaire and our file of names is continually updated. In fact, we make more than 300 changes to this list each month.

In order to select the recipients of our questionnaire, we chose the SIC 4-digit classifications that, in our opinion, were our best markets. Then we took the top 20% of these categories which would do approximately 80% of the business. This cut-off was made by employment levels.

We are making quarterly mailings to the names on this list, offering these people helpful, technical information that will assist them in solving hose line problems. We have had excellent response to the first two of these mailings and have sent out over 2,500 pieces of literature to these prospects.

Our sales engineers and our distributors each have a set of cards with the names of the prospects in their territory and each of the leads we receive as a result of a mailing is followed up by these people in the field.

'To Determine If There Is a Field for Our Equipment'

SIC as applied by J. O. Ross Engineering Division of Midland-Ross Corp., manufacturers of drying, baking and curing ovens, ventilating, heating and conditioning units

We use the number of employees in various plants in our marketing program in an effort to determine the size of the plants and if their production is large enough to include our equipment. This is also a basis on which to determine whether or not there is a field for our equipment in those particular areas. The number of employees in plant may also influence the design of our equipment; if we find enough small companies we may alter our design a bit to make the equipment fit the production

needs of these particular companies.

Where territories have been previously developed, or existing territories are satisfactory, such data have been used to apportion sales potentials among territories and sales personnel. In cases where no dollar potentials are available, such indices have been applied directly to sales budgets as a form of quota guide.

The types of plants used, or areas of employment, of course, depend on the product with which we are working. Recently, for example, we used the steel, textile, lumber and paper industries, since these were key customers of one of our divisions. Other occasions have called for metal fabricating or metalworking industries, since the location of these concerns were vital to the placement of sales personnel.

'To Determine Most Beneficial Areas for Interviewing'

SIC as applied by Worthington Corp., makers of turbine-generators, engines, pumps, air conditioning and refrigeration, meters and power transmission equipment

We use statistics covering the number of plants and employees coded by SIC in the following ways:

1. To locate major market areas by county and industry.

2. To determine market potentials.

3. To determine the most beneficial areas for interviewing.

In interviewing, for example, if we were going to make a study of a certain product, we would determine the most likely applications by industry. We would divide the industry into its SIC classifications and locate the areas with the largest potential. We would also review the areas of applications to determine minimum travel costs.

'Territories Are Then Adjusted by the Sales Manager'

SIC as applied by The Stanley Works, makers of hardware, electric tools, steel strapping

Our principal use of "number of employees" and "number of plants" figures by Government SIC has been for the development of new sales territories. In this case, such data are developed into indices (simple percentages of the total number of plants or employees) by these geographic limits, then added together into territories. The size of each territory, and the number of territories, depends upon the number of our present salesmen or, in some cases, the planned number of salesmen. These somewhat academically developed territories are then adjusted by the sales manager in the light of knowledge and experience.

'To Locate Branch Warehouses'

SIC as applied by the Grinnell Co., makers of sprinklers, valves, pipe, plumbing and heating material

We have used number of manufacturing plants and number of employees:

1. In working out potential (percent of U. S. total) for each Grinnell sales territory. We apply weights to three basic components – number of establishments in selected industries, number of employees in manufacturing and mining, and your own SM sales potential (by counties).

2. In reporting on the value of a particular city as a likely location for a Grinnell branch warehouse.

You Will Need This Directory

A basic working tool for everyone engaged in using the SIC (Standard Industrial Classification) codes is the 434-page "Standard Industrial Classification Manual." The manual gives the two and four-digit code numbers and a word description for each. By means of this code you can identify the products and services of your customers and prospects. Write: Superintendent of Documents, Washington 25, D. C., with a remittance of $2.65.

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THE SCRATCH PAD

BY T. HARRY THOMPSON

Bugs Bunny version: "Seven more hopping days till Christmas."

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"Le Sueur," name of a favorite brand of peas at our pad, means "sweat; perspiration; labor-pains" if my French dictionary isn't kidding me.

•

In the Manhattan directory are a Barbara Sevier and a Bob Seville, but no Barbara Seville.

•

Pedantic version: "Microcosm, isn't it?"

•

Old-timer: One who can remember roll-top desks.

•

Richard Armour often brightens my day with nonsense like this: "Kids eat their spinach/Inach by inach." He would understand my zany parody on an Ethel Merman hit: "There's no vinist like chauvinist."

•

Schmidt's of Philadelphia talks about "the one man in four who wants the full-taste beer." What do the other three want, bellywash?

•

That sprig of parsley you toss aside disdainfully with a flick of a fork, a Columbia professor once told me, contains up to 15,000 Sherman units of Vitamin A, the growth vitamin. Now, aren't you sorry?

•

Girvin Cuthbert, of Cedar Grove, N. J., sees a sign over a fish market in the French Quarter of New Orleans reading: "Name your poisson."

•

Paul Lindsay, spm for Osborne-Kemper-Thomas, the calendar people, liked a Copy Shop ad in SM headed "Copywriting Studio, Confidential Work," but wonders if it's so confidential they write with the shades drawn. No, Paul, only the rough sketches are drawn, and is that corny!

•

"Wanted–Dedicated weight-lifter for training partner. Ernie's Gym, 1620 W. Venango St. GE 8-0247." I'd be more dead than dedicated lifting anything heavier than a martini.

•

I liked this musical limerick:

There was a young lady from Rio,
Who tried to play Haydn's First
Trio.
But her skill was so scanty,
She played it andante
Instead of allegro con brio.

•

Looking back, the naming of railroads was curious business. Matching cities with states, for example, like Baltimore & Ohio, Boston & Maine, Delaware & Lackawanna. Any more?

•

An advertiser announced a consumer contest in quest of a name for his new transistor radio. I wrote my dealer from whom I had just bought a 23-inch console. No contest-blank came. I wrote the wholesaler. No blank and no reply. I wrote the stockholders' relations division, got a nice letter promising action. And then, as Carter's Pills say, nothing. I still have a good, unused name for a midget radio.

•

The Government has no money of its own. All it has is what it takes from you and me in the form of taxes, plus some crumbs from canal tolls. Before we think of Uncle Sam as loaded, before we say: "Let the Government do it," let us ponder this simple statement by Teddy Roosevelt: "The Government is us. We are the Government, you and I."

•

Instant tea already accounts for 5% of the market, according to The Times, quoted by Curtis Research. Paper napkins, too, are in the lap of luxury.

The Gift of Prophecy

Saint Paul talks about this in one of his epistles to the Corinthians. Who among us in marketing has it? And what a gift it would be!

For example, steel might have foreseen aluminum challenging it and acted accordingly. Aluminum, in turn, might have prophesied the versatility of plastics and envisioned encroachments.

Among modern prophets, I have always admired Jim Farley, who hit it on the nose when he said the Republicans would carry Maine and Vermont in 1936. Period. They did!

That TV program that probes the paranormal, "Alcoa Presents," has shown us some people with the uncanny gift of precognition. They could write their own ticket in our line.

The ability to see around corners (and it may be the lot of electronic computers, as hinted in SM, July 1, page 25) would obviously save unnumbered motions and uncounted money in merchandising.

All of us are gifted with hindsight (20-20 hindsight, Holiday magazine's Caskie Stinnett called it brightly). But how few of us have true foresight? The answer to that is obvious in the grim number of business failures Dun & Bradstreet reports each year.

Jimmy Durante might be forgiven for failing to see beyond his nose, but the rest of us should try, even with the aid of a Univac. A prophet may be without honor, but he would save the firm quite a bundle.

T.H.T